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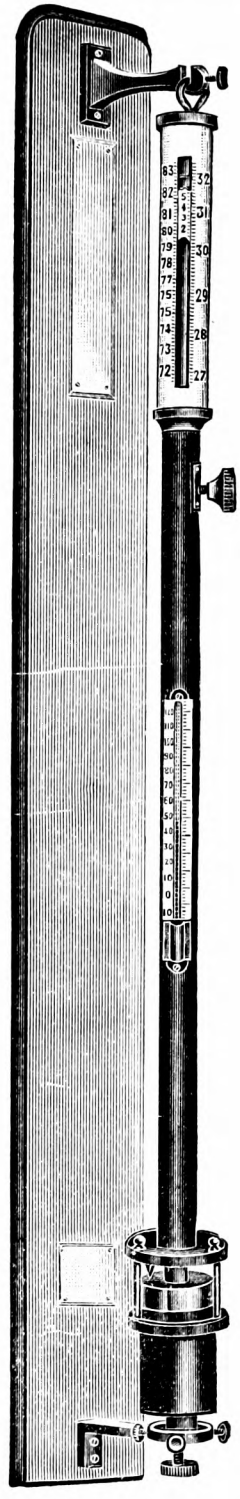

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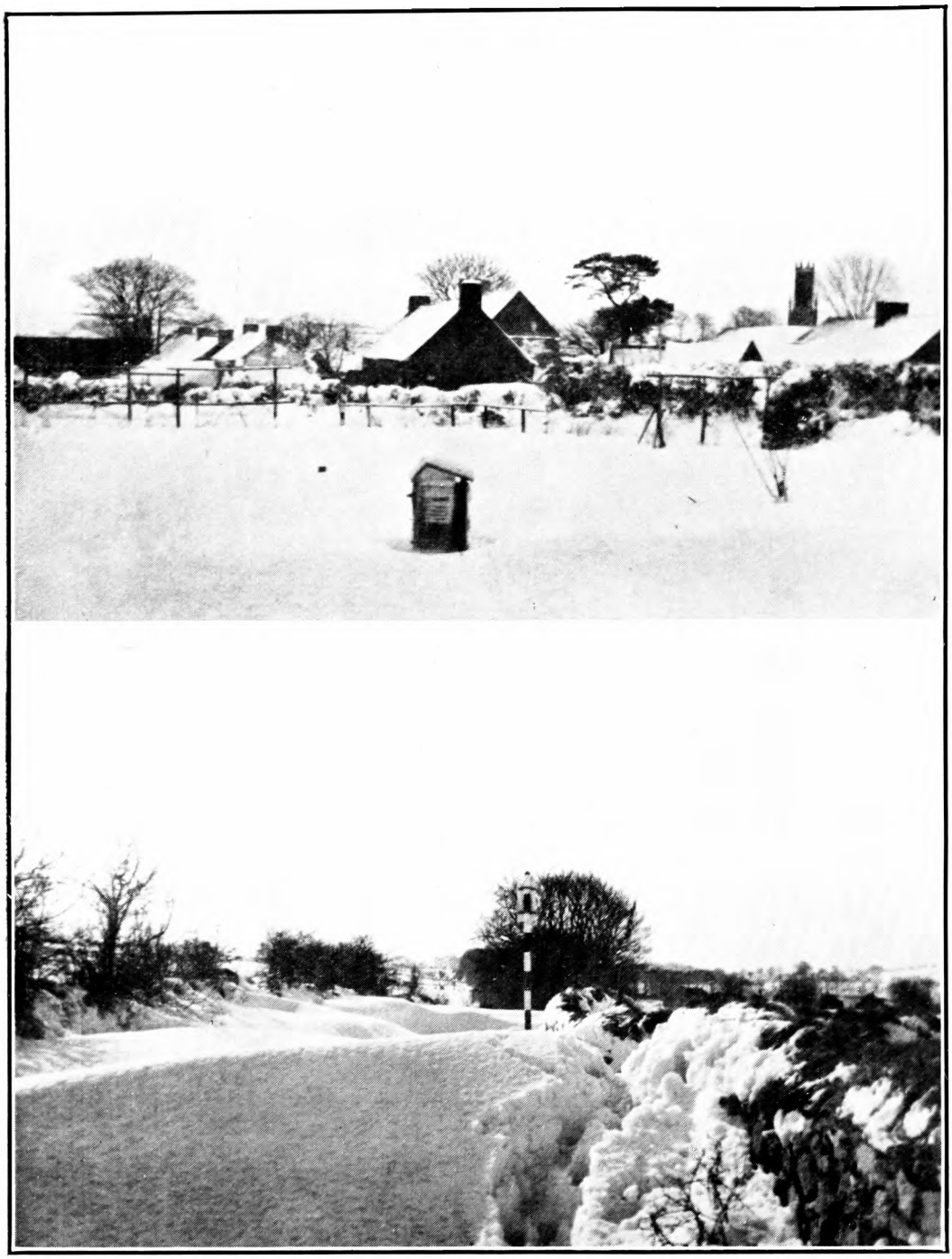

Photo by Rev. C. S. S. Ellison.]

Top.—Garden of Hacketstown Rectory, Co. Carlow, February 24th, 1933. The Rain-Gauge is just visible beyond the screen.

Bottom.—Road from Hacketstown to Clonmore, February 26th, 1933.

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METEOROLOGICAL OFFICE

BRITISH RAINFALL

1933

THE SEVENTY-THIRD ANNUAL VOLUME OF
THE BRITISH RAINFALL ORGANIZATION

Report on the

DISTRIBUTION OF RAIN

IN SPACE AND TIME OVER THE
BRITISH ISLES DURING THE YEAR
1933 AS RECORDED BY OVER 5,000
OBSERVERS IN GREAT BRITAIN AND
IRELAND

WITH MAPS AND ILLUSTRATIONS

Issued by the Authority of the
Meteorological Committee

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ERRATUM IN "BRITISH RAINFALL," 1916.

p. 230. *for* 1489 mm. 58·63 inches *read* 1313 mm. 51·70 inches.

ERRATUM IN "BRITISH RAINFALL," 1931.

p. 67. The entry *Cumberland.*—Penrith (Watermillock, Gatesgarth).... 3·34 *in.* or 6·3 per cent. given under November 2nd should be transferred to November 3rd.

ERRATA IN "BRITISH RAINFALL," 1932.

p. 232. *delete* Port St. Mary (Beach Villa) and data relating thereto.

p. 246. *delete* Inchkeith Lighthouse and data relating thereto.

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BRITISH RAINFALL, 1933

PART I

THE WORK
OF THE
BRITISH RAINFALL ORGANIZATION

BRITISH RAINFALL, 1933.

PART I.

THE WORK OF THE BRITISH RAINFALL ORGANIZATION

THE STAFF OF OBSERVERS.

The detailed account of the rainfall of the year 1933 over the British Isles, which is presented in this volume, follows the lines of previous issues. The basis of the discussion is a collection of about 5,400 returns of rainfall measurements for the year received from all parts of the country. The measurements are generally made every day, but in inaccessible districts they may be made only once a week or even once a month. Only a small number of the observers receive payment from the Meteorological Office; the great majority of the rainfall returns are contributed either by private persons, who measure the rainfall primarily as a matter of private interest, or by public local authorities, and especially the authorities of water undertakings, who find that a knowledge of the rainfall over their gathering grounds is indispensable to them in their work. These two classes of observers forward copies of their observations voluntarily for preservation by the British Rainfall Organization of the Meteorological Office as national records, and for use not only in the preparation of the annual volumes of *British Rainfall* but also for purposes of study and research. In this way records which are primarily of local interest acquire a national value which was not always realized by those who initiated them. To the numerous voluntary observers who forward their observations the Organization desires to acknowledge its indebtedness: it would be quite impossible to compile such an account as this without their assistance and goodwill.

In order to ensure, so far as possible, that the various records of rainfall summarized in the volume may be comparable with one another, the Organization issues to each observer and to anyone who is interested, a copy of a pamphlet entitled *Rules for Rainfall Observers*. This pamphlet was originally drawn up by the late Mr. G. J. Symons, F.R.S., founder of the Organization, and although it

has been extensively revised since his time, yet the fundamental rules laid down by him remain practically unaltered. A new edition has been prepared and issued during the year.

The total number of records printed in Part III of this volume is 5,395, an increase of 12 records over last year. As many as 265 additional records are included in the volume, while 253 records printed in *British Rainfall,* 1932, are no longer available. Details as to the numbers of records printed in earlier volumes are given in a separate table.

The number of records published for England is 5 less than last year and 18 more for Scotland. Wales remains the same and Ireland shows a loss of 1 record. The counties with the largest net gains during 1933 are Kirkcudbrightshire, Staffordshire, Norfolk, Dumbartonshire and Gloucestershire with 15, 7, 6, 5 and 5 respectively. On the other hand there are 8 fewer stations in Essex and 6 fewer in Inverness-shire.

The numerous gains in Kirkcudbrightshire are due to the Galloway Water Power Co.

Of the gains in England those in Staffordshire call for special mention, nine new records adding considerably to our knowledge of the rainfall over the Trent basin. Records are included for four stations set up by Mr. V. A. C. Durand, Engineer to the Witham Drainage General Commissioners, two additional records from Mr. F. O. Kirby, Borough Surveyor and Water Engineer of Doncaster and four additional records from the neighbourhood of Burbage Edge to the south-west of Sheffield from Mr. J. K. Swales, C.E. The inclusion of a record from Skiddaw House to the north-east of Keswick at an altitude of 1,480 feet also calls for special comment. In Wales the record from Yspytty-ystwyth (Hafod), which commenced in 1892, is included again after a temporary break. An additional record is printed from Llyn Aled the new source of supply of the Rhyl W.W. The new records from Trawsfynydd (Darn Gae) and Lake Cowlyd (Capel Curig), supplied by the N. Wales Power Co., will also be of particular service. Five additional gauges were set up during 1934 at isolated farms on the high land surrounding Lake Bala by Capt. G. A. Wright, M.C., Engineer to the Dee Catchment Board, and a number during 1933 over the catchment area of the Derwent Valley Water Board by Mr. R. W. S. Thompson, C.E. In Scotland special mention should be made of the thirteen records in Kirkcudbrightshire, supplied by the Galloway Water Power Co., which appear in *British Rainfall* for the first time, although records back to July, 1929, have now been received. In Ayrshire and the adjacent districts Mr. W. Dunbar, Burgh Surveyor and Water Engineer of Kilmarnock has continued his useful work of stimulating

interest and of securing additional records. Additional records have been received both from Mr. J. N. Stirling, C.E. of Helensburgh and Mr. W. Gray of Ayr. In Ireland an additional record of importance is that from Dungiven (Labbyheige,) supplied by Mr. W. Criswell, C.E., Engineer to the Banagher Water Scheme.

Rainfall records for 1933 and for earlier years have been received in a number of cases, including those at Horley since 1925 from Mr. W. W. Hughes-D'Aeth ; Chipstead since 1925 from Mr. G. R. Rudolf, Stoke in Kent since 1922 from the Rev. A. E. Ottaway, Winnersh Nursery in Berkshire since 1928 from Mr. W. Bates and Capel Curig since 1924 from the N. Wales Power Co.

Among the more serious omissions from the General Table the following stations with long records may be mentioned: Byfleet (West Hall Gardens) ; Kirk Langley (Langley Hall) ; Bedale (Park House) ; Glanton Pyke Gardens ; Uldale (Chapel House Reservoir) ; Kirkby Lonsdale ; Penrhoslligwy School ; Islay (Ardbeg) ; Braemore House ; Kilmacthomas (Comragh House) ; Kilkenny Castle and Belturbet (Cloverhill).

Changes in County boundaries. As a result of the 1929 Local Government Act, the boundaries of all Counties in England are at present being reviewed for the purpose of straightening out anomalies and abolishing detached areas. While these adjustments are likely to be numerous for some while to come, they are not likely to involve the transference of many rainfall stations from one county to another. In the present volume Towersey Vicarage is now given in Oxfordshire 4, Redmarley (Haselden) in Gloucester 2, certain gauges near Burbage in Yorkshire W.R.5 and Burbage (Badger House) in Yorkshire W.R.7. These changes are indicated in the General Table. No changes have yet been made in the areas for each river basin and each county given in the General Table, Part III.

For assistance in the collection of the rainfall returns for the year we are especially indebted to officials of various local organizations, among whom may be mentioned :—Mr. C. P. Sinclair, of the Hertfordshire Natural History Society and Field Club, Mr. R. H. Primavesi, of the Northamptonshire Natural History Society ; Col. H. C. Copeman, of the Norfolk Rainfall Organization ; Mr. W. G. Willis Watson, of Exeter ; Miss Young, Librarian at the Barnstaple Athenæum ; Mr. A. P. Jenkin, of the Cornwall Rainfall Association ; Mr. A. A. Barnes, of the Manchester and Stockport Rainfall Organization ; Mr. A. J. Jenkins, of Jersey ; Miss Cordelia Marshall, of Ambleside ; Mr. W. Dunbar, of Kilmarnock ; and Mr. E. W. M. Murphy, of the Irish Rainfall Association. The work formerly carried out by the Rev. F. P. Synge for the Mid-Wessex Rainfall Association has now been taken over by the Engineer to the Somerset Rivers Catchment Board.

British Rainfall, 1933, *compared with* 1932.
Number of Records Published.

	Gain.	Loss.	Difference.	Per cent. change in year.
England	185	190	− 5	− 0·1
Wales, etc.	15	15	0	0
Scotland	49	31	+ 18	+ 2·1
Ireland	16	17	− 1	− 0·4
British Isles ..	265	253	+ 12	+ 0·2

Number of Rainfall Records Published in the Volumes of "British Rainfall" for the undermentioned Years.

Years.	England.	Wales, etc.	Scotland.	Ireland.	British Isles.	Change from previous year.	No. of Stations per 100 sq. mi.
1861 ..	333	9	109	20	471	+ 47	0·4
1871 ..	1038	88	311	67	1504	+ 5	1·2
1881 ..	1548	131	313	153	2145	+ 41	1·8
1891 ..	2091	168	359	181	2799	+ 23	2·3
1901 ..	2616	253	442	195	3506	+ 13	2·9
1911 ..	3705	397	701	271	5074	+198	4·2
1914 ..	3962	450	753	288	5453	+ 83	4·5
1919 ..	3419	436	766	277	4898	−101	4·1
1920 ..	3460	453	758	281	4952	+ 54	4·1
1921 ..	3577	446	784	271	5078	+126	4·2
1922 ..	3601	470	785	270	5126	+ 48	4·2
1923 ..	3406	442	754	262	4864	−262	4·0
1924 ..	3438	438	756	248	4880	+ 16	4·0
1925 ..	3437	439	750	259	4885	+ 5	4·0
1926 ..	3418	442	775	238	4873	− 12	4·0
1927 ..	3491	448	786	245	4970	+ 97	4·1
1928 ..	3585	441	791	251	5068	+ 98	4·2
1929 ..	3665	453	797	265	5180	+112	4·3
1930 ..	3765	455	834	262	5316	+136	4·4
1931 ..	3763	454	850	262	5329	+ 13	4·4
1932 ..	3798	474	860	251	5383	+ 54	4.5
1933 ..	3793	474	878	250	5395	+ 12	4·5
Difference from 1932	− 5	0	+18	− 1	+ 12	—	0

County.	Records in 1932.	Records Lost.	Records Gained.	Records in 1933.	Records per 100 sq. mi. of area.
ENGLAND.					
London	54	1	0	53	45
Surrey	202	14	16	204	28
Kent	179	7	11	183	12
Sussex	172	8	10	174	12
Hampshire ..	178	11	8	175	11
Berkshire ..	63	4	7	66	9
Middlesex ..	61	5	2	58	25
Hertfordshire	88	6	1	83	13
Buckinghamshire	51	5	3	49	7
Oxfordshire ..	56	3	3	56	7
Northampton ..	63	1	4	66	7
Huntingdonshire	7	0	1	8	2
Bedfordshire ..	26	2	0	24	5
Cambridgeshire	42	1	0	41	5
Essex	110	10	2	102	7
Suffolk ..	67	2	4	69	5
Norfolk ..	79	4	10	85	4
Wiltshire ..	66	3	4	67	5
Dorsetshire ..	89	2	5	92	9
South Devon ..	191	11	7	187	11
North Devon ..	46	5	1	42	5
Cornwall ..	88	4	5	89	7
Somersetshire ..	167	8	7	166	10
Gloucestershire	91	2	7	96	8
Herefordshire	45	1	2	46	5
Shropshire ..	53	6	3	50	4
Staffordshire	64	3	10	71	6
Worcestershire	62	3	1	60	8
Warwickshire	49	4	6	51	6
Leicestershire	38	0	4	42	5
Rutlandshire ..	2	0	0	2	1·3
Lincolnshire ..	63	4	5	64	2
Nottinghamshire	59	5	3	57	7
Derbyshire ..	89	5	3	87	8
Cheshire ..	93	4	4	93	9
South Lancs. ..	125	2	2	125	18
Central Lancs. .	82	7	2	77	14
North Lancs. ..	53	5	1	49	8
Yorkshire, W.R.	326	10	11	327	12
Yorkshire, E.R.	26	0	1	27	2
Yorkshire, N.R.	94	3	1	92	4
Durham	55	2	1	54	5
Northumberland	42	2	3	43	2
Cumberland ..	62	4	2	60	4
Westmorland ..	80	1	2	81	10
MONMOUTH, WALES, ETC.					
Monmouth ..	32	1	3	34	6
Glamorgan ..	69	1	2	70	9
Carmarthen ..	16	1	0	15	1·6
Pembroke ..	12	0	1	13	2
Cardigan ..	19	1	1	19	3
Brecon	87	1	0	86	12
Radnor	26	0	0	26	5
Montgomery ..	24	1	1	24	3
Flint	20	0	0	20	8
Denbigh.. ..	40	0	1	41	6
Merioneth ..	25	1	2	26	4
Carnarvon ..	53	2	3	54	9
Anglesey ..	17	2	0	15	5
Isle of Man ..	9	2	0	7	3
Channel Islands	25	2	1	24	32

County.	Records in 1932.	Records Lost.	Records Gained.	Records in 1933.	Records per 100 sq. mi. of area.
SCOTLAND.					
Wigtown ..	12	0	1	13	3
Kirkcudbright	13	0	15	28	3
Dumfries ..	18	0	0	18	1·7
Roxburgh ..	15	1	0	14	1·2
Selkirk ..	4	0	0	4	1·5
Peebles ..	14	1	0	13	4
Berwick ..	12	0	0	12	3
E. Lothian ..	14	1	0	13	5
Midlothian ..	37	0	1	38	10
W. Lothian ..	17	1	0	16	13
Lanark	53	0	0	53	6
Ayr	95	1	5	99	9
Renfrew ..	38	0	2	40	17
Dumbarton ..	23	0	5	28	10
Stirling.. ..	47	1	1	47	10
Bute	7	0	1	8	4
Argyll	63	5	3	61	1·9
Clackmannan ..	8	1	0	7	13
Kinross	5	1	0	4	5
Fife	32	1	5	36	7
Perth	73	2	1	72	3
Angus	42	3	2	41	5
Kincardine ..	12	1	0	11	3
Aberdeen ..	37	1	2	38	1·9
Banff	10	0	0	10	1·6
Moray	11	0	3	14	3
Nairn	8	0	0	8	5
Inverness ..	77	6	0	71	1·7
Ross & Cromarty	28	3	2	27	0·8
Sutherland ..	8	1	0	7	0·3
Caithness ..	10	0	0	10	1·4
Orkney	12	0	0	12	3
Shetland ..	5	0	0	5	0·9
IRELAND.					
Cork	18	1	2	19	0·7
Kerry	10	1	1	10	0·5
Waterford ..	5	1	1	5	0·7
Tipperary ..	12	1	0	11	0·7
Limerick ..	8	0	1	9	0·9
Clare	5	0	1	6	0·5
Wexford ..	5	0	0	5	0·6
Kilkenny ..	4	2	1	3	0·4
Wicklow ..	8	0	1	9	1·2
Carlow	6	1	0	5	1·4
Leix	2	0	1	3	0·5
Offaly	8	0	0	8	1·0
Kildare.. ..	4	0	0	4	0·6
Dublin	26	2	2	26	7
Meath	6	0	0	6	0·7
Westmeath ..	8	2	0	6	0·8
Louth	4	2	1	3	0·9
Longford ..	6	0	0	6	1·4
Galway	10	0	0	10	0·4
Roscommon ..	3	1	1	3	0·3
Mayo	9	0	1	10	0·5
Sligo	2	0	0	2	0·3
Leitrim	2	0	0	2	0·3
Cavan	3	1	0	2	0·3
Fermanagh ..	8	0	0	8	1·1
Monaghan ..	0	0	0	0	0·0
Armagh	6	0	0	6	1·2
Down	16	0	0	16	1·7
Antrim	20	2	1	19	1·6
Londonderry ..	15	0	1	16	2
Tyrone	5	0	0	5	0·4
Donegal ..	7	0	0	7	0·4

CHECKING OF RECORDS.—Every record of rainfall which is published in Part III of this volume goes through a process of examination before it is included in the table. This consists in the plotting of the monthly and annual totals of rainfall and of the annual numbers of rain-days and wet-days on large scale maps, of which all except the map of rain-days are reproduced in the volume on much reduced scales. Some details of the procedure are set out in *British Rainfall*, 1930, p. xv. The practice has been developed during recent years of asking Engineers with a large number of rain-gauges under their control to forward copies of the readings monthly, so that the values can be plotted on the large scale maps and any apparent inconsistency investigated, while the weather is still within the recollection of the observer.

Another opportunity for critically examining the returns is afforded by the preparation of the Rainfall Survey. This examination is more exacting than that undertaken year by year, since the values are plotted on a map of a larger scale and since computed averages can be compared for stations in the same locality, which were not in operation at the same time. Much has been done in improving the accuracy of the future records by correspondence with those observers whose values have appeared inconsistent on the survey maps. In some cases gauges of standard patterns have been lent, and comparisons made with gauges which have been thought to be giving defective records.

In certain cases where a record has been found to be out of harmony with those from surrounding stations, and no explanation of the difficulty has been found after correspondence with the observer, the station has been inspected and the cause of the error ascertained.

AVERAGES PRINTED IN THE GENERAL TABLE OF BRITISH RAINFALL.—Since 1926 a column in the General Table has been devoted to the average annual rainfall at the various stations, and year by year additional values have been given. This information is supplied mainly by the Rainfall Survey which is being carried out for certain counties year by year.

Since 1930 a distinction has been made in the type, according as the average quoted is (a) the mean of the 35 years 1881 to 1915 or has been weighted in this Office to give a computed mean for that period and (b) the mean of a period of 20 years, or more, but unweighted, or computed outside this Office. This column is gradually being completed.

INVESTIGATIONS.—Three articles are printed in Part IV of this volume. The first deals with the Percolation and Evaporation records maintained at Grayshott (Hampshire) 1904–1929 by Mrs. Lyndon and these are discussed by Mr. S. E. Ashmore.

The second article contains a map showing the distribution of the average annual rainfall over the County of London.

In the third article Mr. F. Hudleston, M.Inst.C.E., of Hutton John, Penrith, gives a summary of the experiments he has made at Hutton John into the effects on rainfall measurements of unorthodox exposures, and of the steps which can be taken to mitigate those effects. The most suitable turf wall is found to be of ten feet internal diameter with the crest horizontal and in the plane of the rim of the gauge, which should, of course, be set up with the rim one foot above the ground. The turf wall should be about six inches thick at the top. The inside should be vertical, but the outside should slope down gently, preferably by as little as one in four. It is advisable to put a $2\frac{1}{2}$ inch drain pipe through the wall at its lowest foundation. A diagram showing the dimensions of the turf wall suggested as a result of these experiments is included in the article.

INSPECTIONS.—Considerable progress was made during the year with the inspection of the stations included in the General Table. About 160 stations were inspected inclusive of Climatological stations and other stations reporting general meteorological observations. The stations inspected included a number near London and near Colne, Nelson, Keighley, Llandudno, Abersoch, Trefriw, Manchester, Bolton, Stockport, Buxton and also those of the Derwent Valley Water Board between Sheffield and Manchester.

Among the many observers who have facilitated the inspections of rain-gauges in their areas, special reference should be made to Mr. T. H. Hartley, Mr. J. F. Bedford (Colne), Mr. A. Atkinson (Keighley), Mr. O. P. Cronshaw (Rhyl), Mr. H. Dearden (Stockport) and Mr. R. W. S. Thompson (Derwent Valley Water Board).

SURVEY MAPS.—The work on the detailed average annual rainfall map of the British Isles on the scale of two miles to the inch, for the period 1881–1915, has been continued. During the year isohyetal lines have been drawn over London, Berkshire, Middlesex, Hertfordshire, Buckinghamshire and the East Riding of Yorkshire. In drawing these maps all the available information is used, averages for stations with short records being weighted to the standard period 1881 to 1915 by comparison with nearby stations with complete records. The averages so computed are included in Part III of *British Rainfall.* Reduced copies of specimen maps and a description of the method used in their preparation are given in articles published in Part IV of *British Rainfall* 1928 and 1929. A rainfall map of the County of London is also included in Part IV of this volume.

In drawing these maps the isohyetal lines are naturally somewhat generalised, and if attention is directed to any small area some

amplification of the lines there may prove necessary. Moreover, additional records are always being accumulated so that slight modifications in the lines may subsequently prove necessary.

INQUIRIES.—A large number of inquiries regarding the rainfall of various parts of the country was dealt with. Among the more important of these, the following may be mentioned :—

Reports were prepared on the rainfall of certain areas in connexion with the Cardiff Corporation Water Bill, over the catchment area of the Derwent Valley Water Board and in connection with flooding in certain localities in South Wales. Information has been supplied to a number of catchment boards, including copies month by month of daily records representative of the area and copies of maps prepared each month showing the distribution of the rainfall over the area in question.

Reports were supplied monthly to the Metropolitan Water Board and to the Thames Conservancy.

OBITUARY.—During the twelve months 1st July, 1933, to 30th June, 1934, reports have been received of the deaths of 59 observers who have contributed to volumes of *British Rainfall*. Of these fifteen have kept rainfall records, or been associated with relatives who have kept records for 30 years or more. A list of these is given below. In most cases the records have been maintained throughout by the same observer. Mr. Freshfield, a Past President of the Royal Geographical Society, was for many years a Trustee of the British Rainfall Organization.

Name.	Last place of observation.	No. of years' records.
W. H. Myers, Esq.	Bishops Waltham, Hants. ..	50
S. Nutter, Esq.	Cambridge	44
Rev. W. E. Stewart	Scalby, Yorkshire	44
Rev. B. P. Oakes	Bury St. Edmunds, Suffolk ..	43
W. Deedes, Esq.	Shrewsbury, Salop	40
H. W. Green, Esq.	Devizes, Wilts.	40
Rev. Canon E. Hill	Bury St. Edmunds, Suffolk ..	38
E. J. Turton, Esq.	Horkstow, Yorkshire	38
J. R. Picard, Esq.	Kirby Lonsdale, Westmorland	36
Major C. G. Brodie, M.C. ..	Fernhill, Isle of Wight ..	33
Miss M. Greenwood	Bedale, Yorkshire	33
G. A. Tyacke, Esq.	Chichester, Sussex	33
Archdeacon T. N. Leeke ..	Exeter, Devon	32
D. W. Freshfield, Esq., D.C.L.	Forest Row, Sussex	30
F. Smallpiece, Esq.	Guildford, Surrey	30

BRITISH RAINFALL, 1933

PART II

RAINFALL AND METEOROLOGY

1933

1. A BRIEF SUMMARY OF THE RAINFALL OF THE YEAR, 1933.

The rainfall of 1933 stands out in marked contrast to that of the previous ten years, in each of which the general rainfall over the British Isles exceeded the average. In fact 1933, with 80 per cent. of the average for the standard period 1881 to 1915, ranks as the driest year over the British Isles generally since before 1870, with but one exception, *viz.*, 1887 with 77 per cent. In the table below, the rainfall of 1933 is compared with that of earlier dry years :—

	1870	1887	1921	1933
	%	%	%	%
England and Wales	82	74	70	81
Scotland	80	80	99	80
Ireland	95	77	88	77
British Isles	84	77	82	80

The rainfall was therefore most remarkable over Ireland, where 1933 ranks with 1887, and over Scotland where 1933, 1887 and 1870 were the driest years on record. Over England and Wales both 1921 and 1887 were drier than 1933. Less than 70 per cent. was recorded to the east of Snowdon, from Liverpool to Oswestry, at Holyhead, near Plinlimmon, from Swansea to Cardiff, near Barnstaple, from the north of London to Harpenden, near Chislehurst and from Chelmsford to Southminster. A number of stations, distributed widely over the British Isles, recorded less rain in 1933 than in any year since before 1870. Details are given in Section 10.

The deficiencies of rainfall were confined more especially to the later half of the year. Actually the total rainfall over the British Isles generally during the seven months January to July was only ·6 inch short of the average, while for the remaining five months the deficiency amounted to 7·5 inches. On the average December, October and November are the wettest months of the year, while August is the fourth wettest month. In 1933 the subsidiary maximum in August failed, while there was in addition a partial failure of the winter rains in November and December. A striking feature of the rainfall during 1933 was the long sequence of nine consecutive months in none of which was the average amount exceeded.

August, 1933, was drier than any August since that of 1913, November, 1933, was drier than any November since that of 1896, while December, 1933, ranks as the driest December since before 1870. The total rainfall during November and December, 1933, of 4·1 inches was less than that during any similar period back to 1870, the previous driest November to December being that of 1879 with 4·2 inches. The total rainfall of November and December, 1933, was less than the average for either month. The total rainfall during the nine months April to December, 1933, of 22·2 inches was less than that of any similar period back to before 1870, the next driest April to December being those of 1921 and 1887, both with 24·1 inches.

The general rainfall of the winter six months, 1932 to 1933, over the British Isles as a whole, amounted to 24·7 inches, or 1·3 inches in excess of the average. The outstanding rains during this period were the persistent cyclonic rains of October, 1932 and those of February 24th to 26th, 1933. The precipitation in the later case was mainly in the form of snow and details are given in Section 7.

The total for the summer of 1933 was 13·8 inches, or 4·2 inches less than the average. The summer of 1933 ranks as the driest over the British Isles generally since 1921 when the corresponding value was 13·1 inches. At Sealand Aerodrome to the west of Chester the total rainfall during the summer was only 6·08 inches or 48 per cent. of the average. The summer of 1933 was remarkable for the unusually frequent periods of warm and sunny weather with neither excessively hot days nor long periods with no rain. The weather was generally pleasant rather than excessively hot or abnormally dry. An account of the general weather conditions is given in a paper on *The Exceptional Summer of 1933*, published in the *Quarterly Journal of the Royal Meteorological Society* for January, 1934. It is shown that the total sunshine of June to September, 1933, over the British Isles generally exceeded that of any other four consecutive months since the similar period in 1911. Many stations in the south-east of England enjoyed during this period nearly 200 hours more than the usual amount. Records of mean temperature indicate that this period was warmer than any similar period back to before 1881.

The general number of rain-days over the British Isles during 1933 was 177, or 27 less than the average number, and less than that in any year since 1887 when there were 174 rain-days.

The number of absolute droughts recorded during 1933 was just short of the average number, but partial droughts and dry spells were more frequent than usual. Few stations failed to record either a partial drought or dry spell at some time during the year. There

were as many as 25 consecutive days from July 17th to August 10th without measurable rain at Cambridge, while the total rainfall for the 66 days from July 16th to September 19th was only ·40 inch at Lowthorpe, to the west of Flamborough Head. Perhaps the most striking absolute drought of the year was that recorded at the end of November and beginning of December. Droughts were, however, far less frequent during 1933 than in 1932 when although the total rainfall exceeded the average there were longer and more frequent spells with little or no rain.

Intense falls of rain in short periods during 1933 were less frequent than usual and fewer than in either of the two previous years. The most noteworthy were those recorded at Monkton Park, near Chippenham, on September 26th, when 4·31 inches fell in two hours and at Silchester House, near Reading, on June 24th, when 2·50 inches fell in 25 minutes.

The total number of heavy falls on rainfall days recorded during 1933 was appreciably less than in either 1932 or 1931. Eighteen measurements of 4 inches or more in one day were made during the year. The majority of the heavy falls enumerated in Section 7 occurred on the following days :—January 2nd and 31st, February 24th, October 9th and 10th. The largest amount was 6·50 inches, recorded at Dunhulladale on Loch Carron in the south of Ross-shire. As much as 5·16 inches, or 18·9 per cent. of the annual total, was recorded at Fleet near Aldershot during 4½ hours on September 26th. At Ystalyfera, to the north of Swansea 6·25 inches, and at Llyn Fawr reservoir, in the mountains at the head of the Rhondda Valley, as much as 7·65 inches was recorded for the 9th and 10th, resulting in severe flooding, comparable in certain areas with that which followed the heavy rain of November 11th, 1929.

2. THE DISTRIBUTION OF RAINFALL IN TIME. THE NUMBER OF RAIN-DAYS AND WET-DAYS IN 1933.

The following definitions have been used in *British Rainfall* in order to obtain a homogeneous series of statistics :—

A *rain-day* is a period of 24 hours, commencing normally at 9 a.m., on which ·01 inch, or 0·2 mm. or more of rain is recorded.

A *wet-day* is a period of 24 hours, commencing normally at 9 a.m., on which ·04 inch, or 1·0 mm. or more of rain is recorded.

The former definition dates from the year 1865, the latter was adopted only about 1917. Each of the terms " rain-day " and " wet-day " is open to criticism, the latter particularly so, since it has a different meaning in ordinary use. It must, therefore, be understood that whenever these terms are used in this publication the meanings set out above are always to be attached to them.

For reasons which are set out in detail in the article entitled " The distribution over the British Isles in time and space of the annual number of days with rain," in *British Rainfall,* 1926, there is frequently a lack of harmony in the annual values at adjacent stations. In fact, the observed differences are sometimes so much greater than that of any other climatic factor, that there is little doubt that some of the individual values are incorrect. Statistics of wet-days were found to be much more consistent. It was this reason, coupled with the fact that similar data are published for certain other countries of Europe, which led to the introduction of statistics of wet-days.

Latterly, however, attention has been re-directed to the improvement of the statistics of rain-days. The Meteorological Office has standardised a new taper measure and new regulations for reporting small quantities of rain have been brought into use. These are set out in " Rules for Rainfall Observers " and in *British Rainfall,* 1931, pp. 5—7.

Information as to the number of rain-days and wet-days during the year is set out in this volume in various forms. As usual, the General Table of rainfall in Part III of this volume shows the number of rain-days and wet-days in 1933 as reported from each station at which daily observations were made. The number of wet-days have been plotted on a large map of which the illustration on p. 6 is a reduced copy. The distribution of the numbers is shown on the map in the usual manner.

Number of "Wet Days" in 1933.

In order to study the distribution of rain-days and wet-days throughout the year, 100 stations have been selected to represent as uniformly as possible the conditions over the whole of the British Isles. The stations are the same as those used last year except that Lochgilphead (Poltalloch), Ullapool and Newtownbutler (Crom Castle) have replaced Crarae Lodge, Poolewe (Inverewe Gardens) and Belturbet (Clover Hill), since these records are no longer available for that table. The number of rain-days and wet-days for each month, as well as for the whole year, have been extracted from the returns from the 100 stations and printed in Table V. Monthly general numbers (for England and Wales, Scotland, Ireland and for the British Isles)

have been worked from these data and they are shown in the table in heavy type. The annual mean values for 1933 are shown again in Tables I and III and the monthly mean values for 1933 in Tables II and IV, where in each case they can be readily compared with similar values for the intervening years from 1917; and with the averages. In the case of rain-days averages are available for the standard period 1881 to 1915, but for wet-days the averages cover only the period 1917 to 1933.

The map of the annual number of wet-days during 1933 is very similar to those for earlier years although the numbers are in general about 30 fewer. As in all the other maps there is a steady increase in the number of wet-days from the south-east to the north-west of the British Isles and from the plains of the east coast to the mountainous regions of the west. In 1933 the number varied from less than 100 along the south coast from Weymouth to Worthing, near Dungeness, over large areas stretching from the Thames Estuary to the Wash, from Worcester to Banbury and from Burton to Doncaster, as well as in the neighbourhood of Weston-super-Mare, to rather more than 200 over small areas in the Western Highlands of Scotland and in the west and north-west of Ireland. More than 100 wet-days were recorded everywhere in Wales, Scotland and Ireland. There were more than 150 wet-days over Dartmoor, Bodmin Moors, near Plinlimmon, in Snowdonia, the English Lake District, parts of the Pennines and over much of the western half of Scotland and of Ireland. Records of more than 175 wet-days were confined to the Western Highlands of Scotland, including the Outer Hebrides, and the south-west, west and north-west of Ireland. As many as 200 wet-days occurred in Skye and Mull, at the head of the River Garry and in the mountains of Donegal and Connemara.

The total number of rain-days varied from rather less than 125 in the neighbourhood of the Thames Estuary, to over 225 in parts or the Inner and Outer Hebrides, Sutherlandshire and Connemara.

The general values given in Table III indicate that the frequency of wet-days was less than the average for the period 1917 to 1933. The number for 1933 was twenty-seven less for England and Wales, thirty-four less for Scotland, thirty-eight less for Ireland and thirty-one less than the average for the British Isles as a whole. The numbers for Scotland, Ireland and the British Isles were less than those for any year since before 1917, whilst that for England and Wales, *viz.*, 115, was less than in any year since 1921, when the number was 110.

It should be emphasized that in the case of wet-days comparable statistics are only available back to 1917, and the averages used for comparison are for the period 1917 to 1933, which includes mainly

wet years. The averages are therefore greater than they would have been if statistics covering the standard period 1881 to 1915 were available. This fact is brought out by Table I, which shows that the mean annual number of rain-days during 1917 to 1933 was 211 or seven more than the average for the standard period 1881 to 1915.

The number of wet-days over the British Isles in each month is given in Table IV. The numbers were fairly uniform from month to month. There were 14 wet-days in October, compared with 6 in September and 8 in December. More than the average number of wet-days occurred only in February and March, when the excesses were only two days and one day respectively. On the other hand there were eight fewer in December, seven fewer in September and five fewer in January. The number during the summer half-year was sixteen fewer, and during the last three months thirteen fewer, than the average. The numbers of wet-days in both November and December, *viz.*, 10 and 8, respectively, were less than those in any similar months since before 1917. The number in September was less than that in any other September.

In dealing with the general numbers of rain-days, given in Tables I and II, it is possible to compare the values for 1933 with computed averages for the 35 years, 1881 to 1915. It is shown in Table I that over the British Isles as a whole there were 177 rain-days or twenty-seven less than the average number. The number for 1933 was less than that in any year since 1887 when there were 174 rain-days. The total excess of rain-days since 1918, over the average number, is however 114, or as many as usually occur in about seven months.

The number of rain-days during 1933 was twenty-six less than the average over England and Wales, twenty-four less over Scotland and twenty-nine less over Ireland. The number for Scotland was less than in any year since before 1881, that for Ireland was less than in any year back to 1887, when there were 181 rain-days, and that for England and Wales was less than in any year since 1921, when there were 158 rain-days.

The number of rain-days over the British Isles in each month is given in Table II. There were 19 in October, while September had the smallest number with 9. More than the average number occurred only in February and May. There were 7 fewer in December, 6 fewer in September and 4 fewer in Novembèr. Out of the deficiency for the whole year of 27 days the last four months accounted for as many as 17 days. The number of rain-days in each of the three months September, November and December was less than that in any similar month since before 1917.

During the year the mean number of rain-days per month was 15, or 2 less than the average. Of these, 11 received sufficient rain

to rank as wet-days. There were five more rain-days than wet-days in May, October, November and December and two only in June. In the other months there were either four or three more.

None of the 100 selected stations failed to record a rain-day during any calendar month of 1933. Less than 10 rain-days were recorded at most stations in the south and west of England during April and August, in Scotland and Ireland during September and in the south of England during December. There were only three rain-days during September at Greenock (Prospect Hill) each of which ranked as a wet-day and only four at Dougarie Lodge, in Bute, and also at Fortrose. Only one wet-day was recorded during September at Fortrose and Lairg and only two at Armagh Observatory and Seaforde in Co. Down. During December there were only four and five rain-days at Gorleston and Cambridge respectively, whilst there were only two wet-days at Cambridge, Haughley in Suffolk and Fortrose. During October most stations in Scotland recorded 20 or more rain-days, and at Mull (Gruline) and Sky (Portree) 9 and 8, respectively, of the 12 months and 20 or more rain-days. The largest number of rain-days experienced in any calendar month was 28 during October at Skye (Portree), Stornoway and Loch More (Achfary), of which 25 ranked as wet-days at Skye (Portree) and Loch More (Achfary).

Table I.—*Annual General Number of Rain-days (Days with ·01 in. or more) in* 1917-1933, *compared with Average,* 1881-1915†.

Year.	England and Wales. Average 188.			Scotland. Average 217.			Ireland. Average 220.			British Isles. Average 204.		
	Rain Days.	Diff. from Aver.	Per cent. of Aver.	Rain Days.	Diff. from Aver.	Per cent. of Aver.	Rain Days.	Diff. from Aver.	Per cent. of Aver.	Rain Days.	Diff. from Aver.	Per cent. of Aver.
1917	185	− 3	98	217	0	100	224	+ 4	102	203	− 1	100
1918	200	+ 12	106	226	+ 9	104	227	+ 7	103	214	+ 10	105
1919	191	+ 3	102	214	− 3	99	213	− 7	97	203	− 1	100
1920	203	+ 15	108	232	+ 15	107	243	+ 23	110	220	+ 16	108
1921	158	− 30	84	224	+ 7	103	217	− 3	99	190	− 14	93
1922	196	+ 8	104	234	+ 17	108	226	+ 6	103	214	+ 10	105
1923	216	+ 28	115	257	+ 40	118	253	+ 33	115	236	+ 32	116
1924	202	+ 14	107	237	+ 20	109	248	+ 28	113	223	+ 19	109
1925	192	+ 4	102	231	+ 14	106	230	+ 10	105	212	+ 8	104
1926	192	+ 4	102	234	+ 17	108	226	+ 6	103	211	+ 7	103
1927	208	+ 20	111	233	+ 16	107	238	+ 18	108	223	+ 19	109
1928	204	+ 16	109	240	+ 23	111	247	+ 27	112	225	+ 21	110
1929	165	− 23	88	217	0	100	218	− 2	99	192	− 12	94
1930	207	+ 19	110	223	+ 6	103	232	+ 12	105	217	+ 13	107
1931	199	+ 11	106	233	+ 16	107	235	+ 15	107	217	+ 13	106
1932	190	+ 2	101	219	+ 2	101	214	− 6	97	204	0	100
1933	162	− 26	86	193	− 24	89	191	− 29	87	177	− 27	87

† The averages for the period 1881–1915 are based on the records from about 100 stations distributed as evenly as possible over the country. The selection of stations is described in an article in *British Rainfall,* 1926, p. 267, and the general number of rain-days in each year from 1881 will be found in Table I of that article.

Table II.—*Monthly General Number of Rain-days (days with ·01 in. or more) in* 1917 *to* 1933, *British Isles, with Average,* 1881-1915‡.

	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1917 ..	15	12	19	16	13	14	12	23	17	25	20	17	203
1918 ..	20	20	12	12	13	13	19	17	25	22	16	25	214
1919 ..	23	12	20	18	11	16	11	16	16	14	20	26	203
1920 ..	24	17	21	23	19	13	24	13	17	13	16	20	220
1921 ..	25	9	23	11	17	7	12	20	11	16	16	23	190
1922 ..	24	20	17	18	13	15	21	19	17	12	16	22	214
1923 ..	22	24	15	17	19	13	18	21	20	25	19	23	236
1924 ..	22	15	10	16	23	17	20	23	20	19	16	22	223
1925 ..	18	23	16	19	23	5	16	17	21	19	15	20	212
1926 ..	24	20	14	17	19	14	14	17	16	17	24	15	211
1927 ..	23	16	21	18	12	20	18	21	22	17	21	14	223
1928 ..	27	17	21	16	11	20	14	19	12	23	23	22	225
1929 ..	14	14	5	13	14	15	14	21	11	22	23	26	192
1930 ..	23	9	19	16	15	12	18	23	18	24	19	21	217
1931 ..	22	22	11	19	19	18	22	15	14	15	22	18	217
1932 ..	19	7	15	22	21	7	20	13	20	25	17	18	204
1933 ..	16	18	16	12	17	12	16	14	9	19	15	13	177
Average	19	17	18	15	15	14	16	17	15	19	19	20	204

‡ The average general values for England and Wales, Scotland and Ireland separately are given in *British Rainfall,* 1927, p. 7, and are discussed in an article on *The Distribution over the British Isles of the average number of days with rain during each month of the year.*—Q.J.R. Meteor. Soc. Vol. 54, 1928.

Table III.—*Annual General Number of Wet-days (Days with ·04 in. or more) in 1917 to 1933, with Average.*

	England and Wales.	Scotland.	Ireland.	British Isles.
1917	134	174	176	155
1918	150	182	188	168
1919	143	172	171	158
1920	151	185	197	171
1921	110	177	166	142
1922	146	181	178	163
1923	159	206	198	182
1924	154	184	199	173
1925	143	179	180	162
1926	141	184	173	161
1927	156	184	185	171
1928	151	193	200	175
1929	121	170	170	147
1930	155	174	186	168
1931	145	180	182	163
1932	136	168	165	152
1933	115	145	142	130
Average 1917-33	142	179	180	161

Table IV.—*Monthly General Number of Wet-days (Days with ·04 in. or more) in 1917 to 1933, British Isles, with Average.*

	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1917 ..	11	8	14	13	10	10	9	20	12	21	15	12	155
1918 ..	15	17	9	9	10	9	15	12	22	16	13	21	168
1919 ..	19	9	15	14	8	12	8	12	13	11	15	22	158
1920 ..	20	13	17	19	15	10	19	9	13	9	12	15	171
1921 ..	20	5	17	8	13	5	10	15	7	12	12	18	142
1922 ..	20	16	13	14	9	11	16	15	13	8	11	17	163
1923 ..	15	20	11	13	14	8	13	17	16	21	16	18	182
1924 ..	17	9	7	12	19	13	17	18	16	15	12	18	173
1925 ..	14	19	11	15	18	3	12	13	15	14	12	16	162
1926 ..	20	15	9	12	15	11	11	13	12	14	19	10	161
1927 ..	19	13	17	13	8	16	13	17	17	13	15	10	171
1928 ..	23	13	16	11	8	16	10	15	9	19	18	17	175
1929 ..	9	10	3	8	11	11	11	16	8	17	20	23	147
1930 ..	19	5	14	12	11	9	14	18	14	20	16	16	168
1931 ..	17	18	7	14	15	14	17	11	9	11	18	12	163
1932 ..	15	3	11	18	15	5	16	9	15	20	12	13	152
1933 ..	12	14	13	9	12	10	12	10	6	14	10	8	130
Average 1917-33	17	12	12	13	12	10	13	14	13	15	14	16	161

Table V.—*Number of "Rain-days" (·01 in. or more) and of "Wet-days" (·04 in. or more) in* 1933.

County and River Division.	Station.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Year.	Total Rainfall.
ENGLAND AND WALES.															in.
London 2	St. Pancras (Camden Square)	14 10	15 11	15 12	7 6	17 8	13 10	12 8	6 4	12 10	17 10	14 5	7 4	149 98	16·77
Kent 2	Lympne (Aerodrome)	15 11	18 9	13 9	9 5	12 9	12 7	11 6	7 4	14 8	16 7	16 10	7 5	150 90	21·42
Sussex 3	Patcham (Brighton W.W.) ...	15 13	15 11	14 10	8 6	14 9	13 11	11 10	7 6	15 13	17 14	13 7	6 5	148 115	24·50
Hampshire .1	Ventnor (Royal National Hos.)	13 13	14 8	10 9	9 5	14 9	10 5	10 8	8 5	14 11	15 12	11 5	10 4	138 94	25·73
Hampshire..7	Selborne (The Wakes)	14 12	17 11	15 12	7 6	11 8	14 11	12 11	11 5	14 12	20 13	13 6	10 6	158 113	31·90
Berkshire ..5	Upton (Manor House)	19 11	14 8	15 11	9 8	16 8	13 8	11 9	6 5	14 10	16 9	13 3	9 4	155 94	17·63
Northants ..4	Wellingborough (Swanspool)..	14 8	11 10	13 12	6 4	13 7	11 9	10 8	7 4	8 7	15 7	15 7	7 3	130 86	17·45
Northants ..4	Eye (Northolm)	15 9	14 10	14 12	11 5	15 5	12 12	11 7	7 4	10 8	16 8	20 8	10 4	155 92	18·67
Cambridge .2	Cambridge (Botanic Gardens).	10 7	12 9	12 9	9 6	15 10	13 11	8 6	6 5	9 7	11 9	15 10	5 2	125 91	15·92
Essex 3	Shoebury ness (Great Wakering)	12 8	11 5	10 8	6 4	14 11	10 7	10 7	6 3	10 10	14 8	15 6	7 3	125 80	14·80
Suffolk 2	Haughley (Haughley House) .	10 7	15 10	12 8	9 6	14 8	11 10	9 7	5 3	10 8	13 9	18 13	8 2	134 91	16·65
Norfolk 1	Gorleston (C. Guard Stn.)	9 7	21 13	14 7	10 6	12 7	11 6	11 6	7 5	10 8	17 13	18 14	4 3	144 95	22·42
Norfolk 4	Sporle	15 11	19 15	15 11	11 9	15 11	15 11	15 10	8 4	11 9	18 11	24 15	9 6	175 123	24·13
Wiltshire ...3	Larkhill (Sch. of Artillery) ...	14 10	16 8	12 10	9 7	13 11	11 8	11 9	7 4	13 10	15 12	10 3	9 4	140 96	21·82
Dorsetshire .3	Poole	12 12	12 10	14 12	7 5	12 5	10 5	11 7	9 6	11 8	13 11	13 5	10 4	134 90	22·49
South Devon4	Holne (Church Park Cottage).	17 11	20 17	16 14	10 10	14 14	13 11	13 13	13 9	12 9	21 16	10 6	11 7	170 137	54·12
North Devon2	Barnstaple (N.Dev.Athenæum)	21 15	21 12	18 11	9 8	16 11	15 9	15 12	18 8	14 8	23 19	14 7	8 6	192 126	27·04
North Devon3	Okehampton (Uplands).....	20 18	19 18	14 12	10 8	13 12	13 10	15 12	10 9	12 7	22 16	12 8	10 7	170 137	41·86
Cornwall ...2	St. Austell (Trevarna)	19 18	20 16	14 12	11 10	18 14	15 14	14 12	16 11	11 9	19 18	14 12	9 7	180 153	42·20
Somerset ...1	Bath (Henrietta Park)	14 10	16 10	16 12	10 7	13 10	9 7	13 9	9 7	14 7	15 12	8 3	8 5	145 99	24·56
Somerset ...3	Angersleigh (Leigh Court)	14 12	17 12	14 13	10 9	14 13	15 10	12 9	8 4	15 11	22 13	12 4	13 6	166 116	30·00
Hereford ...1	Ross (Birchlea)	17 13	13 8	16 12	6 6	18 10	12 10	11 10	10 6	12 9	21 16	10 5	11 6	157 111	24·96
Shropshire ..3	Bishops Castle (The Vicarage)	17 14	17 11	16 12	8 6	17 13	11 9	13 9	11 6	9 7	19 13	10 5	11 6	159 111	23·17
Shropshire ..4	Shifnal (Hatton Grange).....	17 13	17 10	16 11	8 7	21 16	15 11	15 10	11 6	11 6	20 17	16 6	10 6	177 119	24·19
Staffs.....5	Mayfield.....	16 14	16 10	15 10	9 7	15 8	9 9	15 11	7 5	5 5	20 14	14 9	9 4	150 106	26·53

Table V.—*Number of "Rain-days" (·01 in. or more) and of "Wet-days" (·04 in. or more) in* 1933.—*(con.).*

County and River Division.	Station.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Year.	Total Rainfall.
ENGLAND AND WALES—*(con.)*															
Warwick ...1	Warwick Castle Gardens	15 12	13 9	15 9	7 6	15 11	13 11	12 8	9 4	11 6	18 15	16 5	10 4	154 100	19·60
Leicester ...4	Leicester (Stoughton Drive)..	11 11	12 9	15 12	7 7	15 11	13 10	13 10	6 5	9 7	18 12	16 11	6 4	141 109	20·12
Lincoln 3	Horncastle	12 11	17 11	13 12	11 8	16 8	9 9	12 8	7 6	9 5	13 11	21 13	9 5	149 107	21·40
Nottingham.5	Worksop (Hodsock)	15 10	17 11	15 10	9 4	18 11	13 11	11 8	9 2	10 4	16 12	18 13	10 4	161 100	22·11
Cheshire ...2	Northwich (Hunts Lock).....	17 9	18 14	15 11	15 7	17 10	14 10	14 10	13 5	9 6	17 12	11 7	9 3	169 104	19·26
North Lancs.5	Blackpool (Met. Observatory).	16 13	14 11	16 13	11 6	15 7	14 10	10 10	16 12	7 4	17 13	16 7	17 6	169 112	26·15
Yorks. W.R.8	Meltham (Harewood Lodge) ..	17 13	17 17	17 12	14 10	17 10	10 8	15 13	15 9	11 7	17 15	17 8	10 6	177 128	35·77
Yorks. E.R..3	Hull (Pearson Park)	16 7	20 15	13 10	14 6	18 12	11 9	10 7	7 5	10 6	16 11	22 13	15 6	172 107	23·70
Yorks. E.R..4	Filey Vicarage	17 12	12 8	14 11	10 7	18 9	12 12	13 9	7 3	14 10	17 13	23 19	17 12	174 125	21·60
Yorks. N.R..1	West Witton (Ivy House).....	15 12	18 14	17 12	13 11	17 15	9 9	15 13	7 4	10 8	18 16	19 13	16 6	174 133	30·65
Yorks. N.R. 2	Felixkirk (Mount St. John) ..	15 8	20 16	13 11	11 9	19 12	10 7	15 11	9 5	6 4	17 12	23 18	13 11	171 124	28·78
Durham ...2	Sunderland (W. Hendon Ho.).	18 8	15 12	12 7	12 6	18 9	9 7	15 11	13 7	10 5	17 12	24 17	22 15	185 116	26·27
North'land..6	Ilderton (Lilburn Tower Gdns.)	15 9	20 14	13 8	14 12	18 11	13 10	14 12	14 8	10 7	17 14	21 15	24 15	193 135	28·26
Cumberland.1	Geltsdale	16 13	17 11	16 16	15 11	17 12	13 11	15 15	20 12	9 8	17 15	14 10	14 10	183 144	30·05
Westm'land.2	Grasmere (The Wray).....	18 12	18 15	20 18	16 10	17 14	11 9	18 14	19 17	8 5	21 16	15 11	16 9	197 150	67·44
Glamorgan..6	Treherbert (Tyn-y-waun).....	18 15	19 19	17 13	11 9	17 10	16 13	15 14	11 7	11 8	17 17	12 8	12 5	176 138	67·96
Carmarthen.2	Carmarthen (The Friary).....	18 13	19 16	14 11	8 7	14 11	13 11	16 10	12 8	9 6	19 17	10 7	7 5	159 122	36·34
Pembroke ..4	Haverfordwest (Portfield)	18 16	22 16	15 12	11 8	14 12	13 12	12 9	13 9	9 8	21 16	15 13	11 8	174 139	39·67
Cardigan ...3	Lampeter (Falcondale).....	18 14	19 18	17 16	10 8	15 11	12 11	16 14	14 9	11 10	20 18	13 9	8 7	173 145	39·72
Denbigh ...2	Denbigh (Garn)	17 17	15 13	15 14	9 6	15 12	9 8	12 9	11 7	7 5	20 17	14 10	15 7	159 125	22·68
Merioneth ..4	Dolgelley (Bontddu)	18 15	16 15	17 13	11 7	17 12	16 14	18 15	14 13	10 8	20 16	14 11	13 9	184 148	45·88
Anglesey	Llanerchymedd (Ll'diarth Es.)	19 17	19 17	17 14	13 12	21 13	12 9	12 12	10 7	7 7	19 17	18 14	13 10	180 149	29·12
England and Wales	**(Mean of 47 Stations)**.....	**16 12**	**16 12**	**15 12**	**10 7**	**16 10**	**12 10**	**13 10**	**10 6**	**11 8**	**17 13**	**15 9**	**11 6**	**162 115**	**28·37**

Table V.—*Number of "Rain-days" (·01 in. or more) and of "Wet-days" (·04 in. or more) in* 1933.—(*con.*).

County and River Division.	Station.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Year.	Total Rainfall.
ISLE OF MAN.															in.
Isle of Man ..	Douglas (Borough Cemetery)..	16 12	20 15	16 12	12 10	18 14	10 8	16 11	14 9	6 5	21 15	15 12	17 9	181 132	32·76
CHANNEL ISLANDS.															
Guernsey	St. Peter Port (Grange Road).	17 16	17 13	11 9	10 7	12 9	14 9	13 9	12 7	15 14	17 12	17 15	8 7	163 127	29·21
SCOTLAND.															
Wigtown ...3	Whithorn (Physgill)	16 13	16 12	19 12	12 6	13 11	11 9	16 12	19 11	5 3	17 12	15 10	13 8	172 119	27·24
Dumfries ...3	Dumfries (Crichton R. Inst.) ..	13 11	15 12	19 12	13 7	17 11	12 9	16 11	16 10	6 4	14 10	10 7	15 4	166 108	28·22
Peebles.... 1	Edin. W.W. (Victoria Lodge)..	14 11	12 12	13 13	16 12	17 11	11 8	21 17	19 14	8 7	20 15	17 13	17 9	185 142	38·53
Berwick 4	Duns Castle	12 7	17 12	11 7	14 11	18 12	12 7	14 13	15 10	11 7	15 14	16 12	21 13	176 125	23·29
W. Lothian 2	Linlithgow (Preston House) ..	14 10	14 10	17 12	13 9	15 12	10 8	18 15	16 10	10 3	14 10	15 10	15 6	171 115	23·92
Lanarkshire.5	Strathaven (Dungavel).....	15 12	19 16	17 15	14 13	17 12	10 8	18 14	21 19	8 5	23 16	15 9	12 11	189 150	40·11
Ayrshire....6	Maybole (Culzean Castle).....	13 12	14 13	16 12	11 8	14 11	8 7	15 12	16 12	6 4	18 13	10 7	10 9	151 120	29·98
Renfrew ...3	Greenock (Prospect Hill).....	18 13	18 13	19 17	17 11	20 14	12 11	20 18	20 19	3 3	20 17	14 10	12 8	193 154	43·22
Buteshire ..3	Dougarie Lodge.....	16 14	19 16	16 14	11 9	14 12	9 7	15 13	23 19	4 4	22 16	15 11	14 9	178 144	38·50
Argyllshire..8	Lochgilphead (Poltalloch)....	18 16	20 19	18 17	18 16	18 17	13 12	18 14	26 23	6 6	21 20	17 15	14 12	207 187	50·15
Argyllshire.14	Islay (Eallabus)	19 17	24 19	21 15	16 10	17 16	11 7	18 13	20 17	5 4	23 17	16 11	11 9	201 155	39·76
Argyllshire.14	Mull (Gruline)	19 17	23 23	21 17	22 18	22 16	12 11	23 21	27 23	9 6	23 22	23 14	21 14	245 202	70·71
Argyllshire.14	Tiree.....	20 17	25 18	19 16	21 13	21 15	10 7	20 16	24 20	9 7	23 19	18 11	18 10	228 169	42·08
Fifeshire....3	Leuchars (Aerodrome)	11 7	14 10	13 8	17 7	19 8	11 9	17 15	15 7	8 4	15 9	15 11	17 9	172 104	20·03
Perthshire .11	Aberfeldy (Dall Avon)	15 14	18 11	13 12	16 9	14 12	12 7	21 17	16 11	7 6	19 11	18 11	16 6	185 127	30·79
Kincardine .2	Stonehaven (Mains of Cowie)..	9 8	21 15	9 9	12 9	9 8	6 6	15 12	13 9	6 3	15 10	17 15	17 10	149 114	24·81
Aberdeen ..1	Balmoral (Castle Gardens) ...	14 10	24 17	14 10	22 11	19 10	14 8	20 15	15 5	12 6	23 17	20 11	21 8	218 128	30·56
Aberdeen ..4	Peterhead (Forehill Works) ..	16 10	21 19	10 8	19 11	13 10	9 7	15 12	14 12	10 6	24 21	20 17	12 11	183 144	26·87
Morayshire .2	Fochabers (Gordon Castle) ..	11 7	23 17	10 7	14 10	14 8	10 9	15 13	17 12	9 6	21 19	18 14	9 6	171 128	24·39
Inverness ..3	Cluny Castle	18 12	22 13	15 13	24 19	18 8	11 7	15 13	22 20	7 6	21 17	17 10	11 7	201 145	28·20
Inverness .16	Fort William (The Factory) ..	19 15	24 16	18 15	22 17	19 13	15 13	22 20	25 21	7 5	23 19	18 13	19 11	231 178	58·66

Table V.—*Number of "Rain-days" (·01 in. or more) and of "Wet-days" (·04 in. or more) in 1933.—(con.).*

County and River Division.	Station.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Year	Total Rainfall.
SCOTLAND —(*con.*).															in.
Inverness .18	Skye (Portree)	20 18	24 21	23 18	21 18	16 13	14 11	21 17	25 23	11 6	28 25	21 17	19 12	243 199	29·24
R'&Cromarty3	Fortrose	14 9	16 12	8 4	17 10	12 7	8 6	17 14	14 9	4 1	23 18	9 6	8 2	150 98	15·64
R'&Cromarty7	Ullapool.....	16 15	24 20	16 12	19 11	15 7	13 13	20 16	22 15	10 5	26 21	19 14	10 7	210 156	39·40
R'&Cr'm'rty10	Stornoway (C. Guard Stn.) ...	19 16	22 19	20 14	23 19	13 5	11 10	19 13	24 21	9 4	28 20	18 9	19 11	225 161	34·74
Sutherland .1	Lairg	11 10	17 14	12 10	18 14	12 8	8 6	14 10	17 12	6 1	27 17	11 10	9 7	162 119	26·12
Sutherland .5	Loch More (Achfary)	21 19	25 24	19 17	24 20	18 12	13 13	25 18	25 22	9 6	28 25	19 14	15 13	241 203	67·29
Caithness ..3	Thurso (Buckies)	14 12	26 23	11 9	19 14	8 6	10 9	16 14	21 18	7 6	21 20	23 20	14 8	190 159	29·22
Scotland	**(Mean of 28 Stations)**.....	**15 12**	**20 16**	**16 12**	**17 12**	**16 11**	**11 9**	**18 15**	**19 15**	**8 5**	**21 17**	**17 12**	**15 9**	**193 145**	**36·13**
IRELAND.															
Co. Cork....6	Dunmanway (The Rectory)..	19 16	19 15	25 17	14 10	23 19	13 8	19 17	9 6	7 7	21 12	16 10	18 9	203 146	40·20
Co. Cork....7	Glanmire (Lota Lodge)	15 12	14 11	18 13	10 7	23 14	15 11	19 13	9 8	8 6	17 11	15 8	11 10	174 124	29·01
Co. Cork....9	Mallow (Longueville)	18 12	19 13	22 15	12 9	25 18	15 12	19 16	11 9	10 8	20 13	16 9	15 7	202 141	27·41
Co. Kerry...3	Valentia (Observatory)	22 16	17 13	23 20	11 7	24 19	17 10	20 15	20 13	9 7	17 13	15 11	16 11	211 155	45·15
Co.Waterford 3	Waterford (Gortmore)	17 10	18 10	18 11	9 8	19 12	17 11	17 11	9 5	13 8	17 12	12 9	11 8	177 115	32·17
Co.Tipperary1	Nenagh (Castle Lough).....	18 13	17 13	20 18	10 9	22 15	17 16	19 15	17 11	10 6	19 16	15 6	10 6	194 144	30·70
Co.Tipperary3	Cashel (Ballinamona)	16 9	18 11	20 15	12 9	21 16	19 13	18 15	14 9	10 7	19 10	15 5	14 8	196 127	27·34
Co. Limerick 2	Foynes (Coolnanes).....	20 16	15 9	21 18	10 8	23 15	18 12	21 15	17 9	9 7	20 13	14 8	8 7	196 137	26·07
Co. Wexford 4	Gorey (Courtown House)	12 9	15 11	13 11	9 5	18 13	11 7	16 14	8 4	7 5	15 10	11 5	8 7	143 101	30·27
Co. Leix....2	Abbey Leix (Blandsfort).....	18 12	18 13	17 14	10 8	19 14	16 15	19 13	13 9	9 8	18 14	16 12	10 9	183 141	29·98
Co. Dublin..2	Dublin City (Fitz William Sq).	12 8	20 11	13 11	9 5	17 12	13 9	14 10	12 5	8 6	16 10	13 7	16 6	163 100	19·26
Co. Meath ..4	Kells (Headfort)	16 11	14 11	14 11	10 9	16 15	14 13	18 13	16 11	9 5	13 10	15 11	15 9	170 129	26·64
Co. W'meath1	Mullingar (Belvedere Ho.)....	16 13	16 13	15 13	10 10	20 17	17 15	19 14	17 12	8 6	18 12	14 10	15 12	185 147	27·65
Co. Longford2	Newtownforbes (Cas. Forbes Gardens)	14 14	15 13	15 14	9 9	23 20	18 13	15 14	13 13	6 6	13 11	11 9	10 8	162 144	30·23
Co. Galway .3	Ballynahinch Castle	16 14	18 15	24 22	15 11	22 20	17 16	20 16	20 18	7 7	20 15	14 11	17 11	210 176	51·81

Table V.—*Number of "Rain-days" (·01 in. or more) and of "Wet-days" (·04 in. or more) in* 1933.—(*con.*).

County and River Division.	Station.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Year.	Total Rain-fall.
IRELAND —(*con*).															in.
Co. Mayo ...4	Mallaranny.....	20 19	20 14	23 20	14 12	19 19	15 14	19 18	20 19	12 9	24 21	18 15	14 11	218 191	53·74
Co. Sligo ...2	Collooney (Markree Cas.)	16 14	23 18	22 19	14 11	23 18	16 14	23 18	20 13	9 6	20 18	19 14	15 11	220 174	34·98
Co. Ferm'gh 1	Newtownbutler (Crom. Cas.)	20 13	23 15	20 15	12 8	23 14	15 12	21 15	17 9	7 4	19 14	14 9	13 8	204 136	28·57
Co. Armagh.5	Armagh (Observatory)	15 10	22 13	18 14	11 5	20 17	11 10	19 11	16 11	6 2	13 11	14 8	13 9	178 121	21·59
Co. Down...2	Seaforde	17 9	19 15	20 17	15 10	22 18	10 9	16 14	19 15	8 2	19 11	11 5	18 11	194 136	30·36
Co. Antrim .5	Ballymena (Harryville)	17 16	24 22	19 17	15 10	16 13	10 10	15 12	17 12	6 5	20 16	18 15	18 13	195 161	31·18
Co. Tyrone..3	Omagh (Edenfel).....	17 13	24 17	20 18	15 14	19 17	12 10	20 16	21 14	5 4	21 18	16 11	12 9	202 161	28·66
Co. Donegal.3	Milford (The Manse)	17 16	26 19	21 16	13 10	18 14	15 12	19 13	20 14	5 4	23 19	16 14	13 12	206 163	32·68
Ireland	**(Mean of 23 Stations).....**	**17 13**	**19 14**	**19 15**	**12 9**	**21 16**	**15 12**	**19 14**	**15 11**	**8 6**	**18 13**	**15 10**	**13 9**	**191 142**	**31·98**
British Isles..	**(Mean of 100 Stations).....**	**16 12**	**18 14**	**16 13**	**12 9**	**17 12**	**12 10**	**16 12**	**14 10**	**9 6**	**19 14**	**15 10**	**13 8**	**177 130**	**31·43**

3. ABSOLUTE DROUGHTS, PARTIAL DROUGHTS AND DRY SPELLS IN 1933.

As in the analogous case of rain-days and wet-days (Section 4), certain definitions have to be adopted in order to obtain a reliable body of statistical information on the subject of droughts. The definitions used are :—

An **absolute drought** is a period of at least 15 consecutive days, to none of which is credited ·01 inch of rain or more ;

A **partial drought** is a period of at least 29 consecutive days, the mean daily rainfall of which does not exceed ·01 inch ;

A **dry spell** is a period of at least 15 consecutive days to none of which is credited ·04 inch of rain or more.

These terms are used in *British Rainfall* only in the senses stated. More concise definitions of two of these terms would be :—An *absolute drought* is a period of at least 15 days, none of which is a rain-day ; a *dry spell* is a period of at least 15 days, none of which is a wet-day.

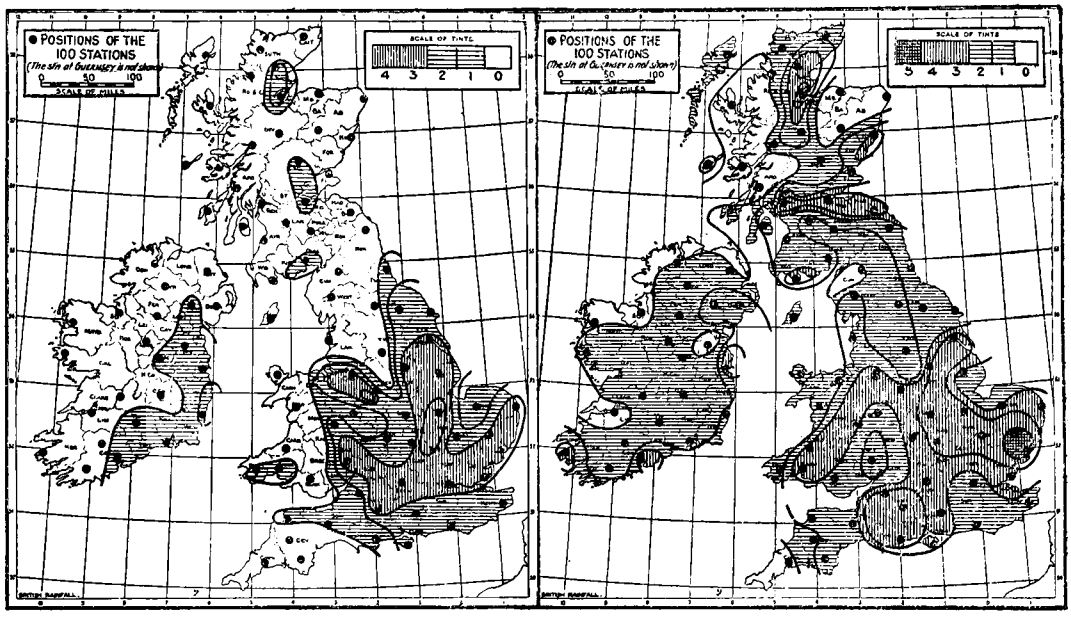
In Table VIII are given particulars of the absolute droughts, partial droughts and dry spells, which occurred at the 100 selected stations of Table V. Stations from which no droughts were reported are omitted from this table.

During 1933 the number of stations out of the 100 which failed to record either a drought or a dry spell was thirteen, a number much smaller than usual, though in 1932 and 1929 the numbers were only four and one respectively. 1933, 1932 and 1929 were noteworthy, therefore, for the large areas over which either a drought or dry spell occurred.

In Tables VI and VII the number of droughts and dry spells recorded in 1933 are compared with those of each year from 1917 to 1932. In the case of absolute droughts and dry spells similar information is available as far back as the famous dry year 1887 (see *British Rainfall* 1929, page 20), and averages are therefore available for the 47 years 1887 to 1933.

The total number of absolute droughts recorded in 1933 was 56 or 3 less than the average 1887 to 1933. The number of partial droughts was 92 or 39 more than the average. A larger number of partial droughts has been recorded in only ten out of the preceding 46 years. The number of dry spells was 191 or 57 in excess of the average for the period 1917 to 1933.

Of the 100 stations, 52 had no absolute drought and 52 no partial drought. There were 14 stations, or 14 less than the average, without a dry spell during 1933. Five dry spells were recorded at one station, *viz.* Haughley (Haughley House). A remarkable feature of the rainfall of 1933 was therefore the few stations which failed to record either a



Partial Droughts, 1933. **Dry Spells, 1933.**

partial drought or a dry spell at some time during the year. Some details as to the total number of partial droughts and dry spells recorded during the year are given in the diagrams.

The longest absolute drought lasted 25 days at Cambridge (Botanic Gardens) from July 17th to August 10th. The longest partial drought persisted during the latter half of July, during August and most of September, a period of 69 days, at Worksop (Hodsock). The longest dry spell occurred at Upton, in Berkshire, and lasted for 40 days from November 15th to December 24th. Longer absolute droughts, partial droughts and dry spells were recorded both in 1932 and 1929.

The first absolute drought of the year commenced on March 20th at Filey, Duns Castle in Berwickshire and St. Peter Port, Guernsey. A number of stations in the southern half of England recorded an absolute drought during the first three weeks of April, and a few in Scotland continuing from about June 20th to July 8th. The most widespread absolute drought of the year covered the end of August and the first half of September. Practically all the absolute droughts recorded during the year in Ireland occurred at this time. Perhaps the most striking absolute drought of the year was that recorded from about November 20th to December 14th, or about ten days later at certain stations in South Wales and the south-east of England. At Grasmere, in the English Lake District, there was no measurable rain from November 21st to December 6th, an unusual occurrence in that locality so late in the year.

Partial droughts recorded in Ireland were confined almost entirely to the period March 18th to April 22nd and those in Scotland to the period November 20th to December 31st. In England and Wales the partial droughts were more uniformly distributed throughout the year, some stations recording as many as four. The diagram shows that no partial droughts were recorded in most of Wales, the Devon-Cornwall Peninsula and the north-west of England including the Pennines. The partial droughts recorded in England and Wales were confined almost entirely to a period in the spring from about March 18th to April 25th, to August (but commencing in some cases as early as July 14th and continuing as late as September 22nd in others) and to the winter (commencing in some cases as early as November 15th and extending to the last day of the year).

Dry spells occurred somewhere in the British Isles covering part of each month of the year. As in the case of partial droughts the dry spells were most frequent in the spring, at the end of August and beginning of September and in December. In Ireland the most widespread dry spell was that of the late summer. Scotland recorded a dry spell from about June 21st to July 8th, which was not recorded elsewhere, apart from isolated stations in the extreme north of England. In England and Wales all stations but two, Geltsdale in Cumberland and St. Austell in Cornwall, recorded at least one dry spell during the year, while at Haughley in Suffolk there were as many as five, covering in all 92 days with only ·10 inch. It is worthy of comment that two dry spells were recorded at Grasmere in the English Lake District, one in January and the other at the end of November and December, periods when wet spells are usually more common in that locality.

Table VI.– *Droughts at* 100 *Stations*, 1917–1933.

Year.	ABSOLUTE DROUGHTS.* No. of Droughts at 100 Stations.	Mean Duration.	Longest.	Stations without one.	PARTIAL DROUGHTS.† No. of Droughts at 100 Stations.	Mean Duration.	Longest.	Stations without one.
		Days.	Days.			Days.	Days.	
1917	109	19	28	23	64	33	61	46
1918	20	16	18	83	14	34	47	87
1919	33	18	31	68	44	38	50	63
1920	18	17	22	84	22	37	54	79
1921	86	19	38	47	109	42	89	30
1922	63	17	23	46	44	36	51	66
1923	11	17	24	89	20	38	54	80
1924	50	16	22	55	25	36	57	81
1925	74	23	33	37	76	38	60	29
1926	20	17	24	83	43	36	57	64
1927	11	17	19	90	19	32	43	83
1928	50	17	22	57	41	33	43	70
1929	110	20	37	14	99	47	85	35
1930	16	17	20	86	29	31	42	72
1931	16	18	21	85	28	34	46	82
1932	87	19	32	36	156	40	71	7
1933	56	18	25	52	92	37	69	52
Average 1887–1933	59	18	26	54	53	36	56	59
1933 diff. from Average.	−3	0	−1	−2	+39	+1	+13	−7

* 15 days without a "rain day." † 29 days averaging not more than ·01 in.

Table VII.—*Dry Spells** *at* 100 *Stations*, 1917–1933.

Year.	Number at 100 Stations.	Mean Duration.	Longest Spell.	Number of Stations with None.	1 or 2.	3 or 4.	5 or more.
		Days.	Days.				
1917	193	20	31	5	70	25	0
1918	118	17	26	36	47	17	0
1919	98	19	38	35	62	3	0
1920	56	18	31	55	44	1	0
1921	201	21	58	21	43	29	7
1922	162	18	30	13	65	22	0
1923	65	18	29	54	43	3	0
1924	120	17	29	32	56	12	0
1925	164	22	43	14	65	21	0
1926	98	19	40	30	65	5	0
1927	91	17	31	43	49	8	0
1928	115	19	31	25	68	7	0
1929	215	22	53	1	65	31	3
1930	76	18	22	45	51	4	0
1931	84	19	26	53	35	12	0
1932	229	23	51	5	53	38	4
1933	191	19	40	14	54	31	1
Average 1917–1933	134	19	36	28	55	16	1

*15 days without a "wet day."

TABLE VIII.—*Droughts and Dry Spells in* 1933.

County and River Division.	Station.	Absolute Droughts.			Partial Droughts.				Dry Spells.			
		Began.	Ended.	Lasted.	Began.	Ended.	Lasted.	Rain.	Began.	Ended.	Lasted.	Rain.
ENGLAND AND WALES				days			days	in.			days	in.
London 2	St. Pancras (Camden Square) .	..	..	..	Mar. 21	April 22	33	·32	..	..	..	..
		..	..	..	July 16	Aug. 14	30	·26	July 20	Aug. 14	26	·12
		..	..	..	Nov. 15	Dec. 29	45	·36	Nov. 17	Dec. 24	38	·09
Kent 2	Lympne (Aerodrome)	..	..	..	Mar. 18	April 18	32	·24	Mar. 31	April 18	19	·04
		..	..	..	Nov. 26	Dec. 25	30	·27	Nov. 27	Dec. 14	18	·04
Sussex 3	Patcham (Brighton W.W.)....	..	..	..	Mar. 19	April 22	35	·27	Mar. 21	April 18	29	·05
		Dec. 8	Dec. 24	17	Nov. 16	Dec. 25	40	·34	Nov. 26	Dec. 24	29	·06
Hampshire .1	Ventnor (Royal Nat. Hospital)	..	..	..	Mar. 19	April 22	35	·22	Mar. 20	April 19	31	·03
		Aug. 23	Sept. 11	20	..	..	..	..	Aug. 23	Sept. 11	20	·00
		..	..	..	Nov. 15	Dec. 24	40	·30	Dec. 2	Dec. 24	23	·07
,, ...7	Selborne (The Wakes)	..	..	..	Mar. 20	April 22	34	·32	Mar. 31	April 19	20	·02
		..	..	..	..	..	..	..	Aug. 23	Sept. 11	20	·01
		..	..	..	Nov. 15	Dec. 26	42	·42	Nov. 18	Dec. 11	24	·12
Berkshire ...5	Upton (Manor House)	..	..	..	Mar. 20	April 22	34	·23	Mar. 21	April 11	22	·03
		..	..	..	..	..	..	..	May 28	June 11	15	·03
		..	..	..	July 14	Sept. 11	60	·60	..	..	..	..
		..	..	..	Nov. 15	Dec. 31	47	·46	Nov. 15	Dec. 24	40	·10
Northants ..4	Wellingborough (Swanspool) ..	April 1	April 22	22	Mar. 20	April 23	35	·35	April 1	April 23	23	·03
		..	..	..	May 8	June 11	35	·34	May 25	June 9	16	·04
		..	..	..	July 16	Aug. 20	36	·36	July 31	Aug. 14	15	·03
		..	..	..	Nov. 17	Dec. 31	45	·43	Nov. 17	Dec. 24	38	·12
,, ...4	Eye (Northolm)	..	..	..	Mar. 20	April 18	30	·27	April 1	April 18	18	·06
		..	..	..	May 8	June 9	33	·26	May 25	June 9	16	·05
		..	..	..	July 17	Aug. 21	36	·35	Aug. 24	Sept. 11	19	·03
		..	..	..	Nov. 27	Dec. 27	31	·30	Nov. 27	Dec. 11	15	·04
Cambridge ..2	Cambridge (Botanic Gardens) .	..	..	..	*3.xii.32*	*Jan. 6*	*35*	*·24*	..	..	..	..
		..	..	..	Mar. 20	April 19	31	·30	April 1	April 19	19	·04
		..	..	..	..	..	..	..	May 26	June 9	15	·01
		July 17	Aug. 10	25	..	..	..	..	July 17	Aug. 10	25	·00
		Dec. 7	Dec. 24	18	Nov. 17	Dec. 31	45	·42	Nov. 25	Dec. 25	31	·05

TABLE VIII.—*Droughts and Dry Spells in* 1933—(*con.*).

County and River Division.	Station.	Absolute Droughts.			Partial Droughts.				Dry Spells.			
		Began.	Ended.	Lasted.	Began.	Ended.	Lasted.	Rain.	Began.	Ended.	Lasted.	Rain.
				days			days	in.			days	in.
Essex.....3	Shoeburyness (Great Wakering)	..	..	..	*25.xi.32*	*Jan. 4*	*41*	*·41*	..	..	..	..
		Mar. 31	April 19	20	Mar. 20	April 24	36	·31	Mar. 31	April 22	23	·03
		..	..	..	July 30	Sept. 10	43	·38	July 30	Aug. 14	16	·02
		..	..	..	Nov. 26	Dec. 25	30	·22	Nov. 27	Dec. 25	29	·06
Suffolk 2	Haughley (Haughley House) .	..	..	..	Mar. 21	April 22	33	·30	April 3	April 22	20	·04
		May 25	June 9	16	..	..	..	..	May 25	June 9	16	·60
		..	..	..	July 21	Aug. 21	32	·21	July 21	Aug. 10	21	·02
		..	..	..	..	..	..	..	Aug. 23	Sept. 11	20	·03
		..	..	..	Nov. 18	Dec. 25	38	·38	Nov. 27	Dec. 11	15	·01
Norfolk 1	Gorleston (C. Guard Station)..	..	..	..	Mar. 20	April 24	36	·26	..	..	..	..
		..	..	..	July 22	Aug. 21	31	·30	July 22	Aug. 10	20	·07
		..	..	..	..	..	..	..	Aug. 24	Sept. 12	20	·04
		..	..	..	Nov. 25	Dec. 25	31	·28	Nov. 27	Dec. 13	17	·04
,, ...4	Sporle.....	..	..	..	July 21	Aug. 19	30	·24	July 30	Aug. 14	16	·07
		..	..	..	..	..	..	..	Aug. 23	Sept. 11	20	·05
Wiltshire....3	Larkhill (Sch. of Artillery) ...	..	..	..	Mar. 19	April 22	35	·28	Mar. 31	April 22	23	·04
		..	.	..	July 15	Aug. 20	37	·35	..	..	..	.
		Aug. 23	Sept. 10	19	..	..	..	..	Aug. 23	Sept. 10	19	·00
		..	..	..	..	..	..	..	Oct. 29	Nov. 12	15	·13
		..	..	..	Nov. 15	Dec. 26	42	·38	Dec. 2	Dec. 24	23	·06
Dorsetshire .3	Poole	..	..	..	Mar. 19	April 22	35	·31	April 1	April 22	22	·04
		..	..	..	..	..	..	..	May 7	May 25	19	·16
		Aug. 23	Sept. 11	20	..	..	..	..	Aug. 23	Sept. 11	20	·00
		..	..	..	..	..	..	..	Dec. 2	Dec. 24	23	·05
S. Devon....4	Holne (Church Park Cottage) .	..	..	..	..	..	..	..	Aug. 23	Sept. 11	20	·03
		..	..	..	..	..	..	..	Dec. 3	Dec. 24	22	·04
N. Devon ...2	Barnstaple (N. Dev. Athenm.)	April 1	April 18	18	Mar. 19	April 21	34	·27	April 1	April 18	18	·00
		..	..	..	..	..	..	..	Dec. 3	Dec. 24	22	·09
,, ...3	Okehampton (Uplands).....	Aug. 23	Sept. 11	20	..	..	..	..	Aug. 23	Sept. 11	20	·00
Somerset ...1	Bath (Henrietta Park)	..	..	..	Mar. 20	April 22	34	·23	April 1	April 22	22	·03
		..	..	..	..	..	..	..	Aug. 23	Sept. 11	20	·01
		..	..	..	..	..	..	..	Oct. 28	Nov. 12	16	·06
		..	..	..	..	..	..	..	Dec. 2	Dec. 24	23	·05

TABLE VIII.—*Droughts and Dry Spells in* 1933—(*con.*).

County and River Division.	Station.	Absolute Droughts.			Partial Droughts.				Dry Spells.			
		Began.	Ended.	Lasted.	Began.	Ended.	Lasted.	Rain.	Began.	Ended.	Lasted.	Rain.
				days			days	in.			days	in.
Somerset ...3	Angersleigh (Leigh Court)	..	..	..	Mar. 21	April 21	32	·27	..	..	..	..
		..	..	..	..	..	..	..	Aug. 23	Sept. 11	20	·02
		..	..	..	..	..	..	..	Dec. 3	Dec. 24	22	·10
Hereford ...1	Ross (Birchlea).....	April 1	April 22	22	Mar. 20	April 22	34	·23	April 1	April 22	22	·00
		..	..	..	July 17	Aug. 16	31	·30	..	..	..	..
		..	..	..	Nov. 20	Dec. 26	37	·30	..	..	..	..
Shropshire ..3	Bishops Castle (The Vicarage).	April 1	April 21	21	Mar. 20	April 22	34	·28	April 1	April 22	22	·02
		..	..	..	..	..	..	..	May 27	June 15	20	·04
		..	..	..	July 16	Aug. 15	31	·24	..	..	..	..
		..	..	..	..	..	..	..	Sept. 1	Sept. 18	18	·02
,, ...4	Shifnal (Hatton Grange).....	Sept. 1	Sept. 15	15	..	..	..	..	Sept. 1	Sept. 17	17	·02
		..	..	..	Nov. 16	Dec. 24	39	·39	Nov. 20	Dec. 6	17	·06
Staffordshire 5	Mayfield.....	..	..	..	Mar. 20	April 22	34	·34	April 1	April 22	22	·02
		..	..	..	May 15	June 15	32	·32	..	..	..	..
		Aug. 24	Sept. 16	24	Aug. 23	Sept. 22	31	·25	Aug. 23	Sept. 16	25	·01
		..	..	..	Nov. 18	Dec. 29	42	·41	Nov. 20	Dec. 11	22	·08
Warwickshire1	Warwick Castle Gardens.....	April 1	April 22	22	Mar. 20	April 22	34	·25	April 1	April 22	22	·00
		..	..	..	..	..	..	..	July 31	Aug. 14	15	·07
		Nov. 25	Dec. 13	19	Nov. 15	Dec. 31	47	·40	Nov. 16	Dec. 13	28	·08
Leicestershire4	Leicester (Stoughton Drive)...	April 1	April 22	22	..	..	..	..	April 1	April 22	22	·00
		..	..	..	..	..	..	..	May 25	June 9	16	·01
		..	..	..	July 17	Aug. 20	35	·30	July 30	Aug. 14	16	·08
		Nov. 26	Dec. 14	19	Nov. 18	Dec. 29	42	·42	Nov. 26	Dec. 14	19	·00
Lincolnshire 3	Horncastle.....	..	..	..	Mar. 20	April 22	34	·27	..	..	..	..
		..	..	..	July 17	Aug. 19	34	·32	July 20	Aug. 10	22	·06
		..	..	..	Aug. 23	Sept. 20	29	·18	Sept. 1	Sept. 19	19	·05
Nottingham-shire. 5	Worksop (Hodsock).....	..	..	..	Mar. 18	April 23	37	·32	April 1	April 23	23	·05
		..	..	..	..	..	..	..	May 26	June 9	15	·01
		..	..	..	..	..	..	..	July 31	Aug. 21	22	·11
		..	..	..	July 14	Sept. 20	69	·67	Sept. 1	Sept. 20	20	·09
		..	..	..	Nov. 27	Dec. 29	33	·32	..	..	..	..

TABLE VIII.—*Droughts and Dry Spells in* 1933—(*con.*).

County and River Division.	Station.	Absolute Droughts.			Partial Droughts.				Dry Spells.			
		Began.	Ended.	Lasted.	Began.	Ended.	Lasted.	Rain.	Began.	Ended.	Lasted.	Rain.
				days			days	in.			days	in.
Cheshire 2	Northwich (Hunts Lock)	..	..	..	Mar. 20	April 22	34	·30	April 1	April 15	15	·07
		..	..	..	July 15	Aug. 12	29	·29	Aug. 23	Sept. 16	25	·07
		Nov. 20	Dec. 6	17	Nov. 16	Dec. 29	44	·38	Nov. 20	Dec. 10	21	·02
N. Lancs. ...5	Blackpool (Met. Observatory)	Sept. 2	Sept. 16	15	..	..	..	..	Sept. 1	Sept. 16	16	·01
		..	..	..	..	..	..	..	Nov. 20	Dec. 10	21	·08
Yorks, W.R..8	Meltham (Harewood Lodge) ..	..	..	..	..	..	..	..	Nov. 19	Dec. 5	17	·11
,, E.R. 3	Hull (Pearson Park)	..	..	..	..	..	..	..	Jan. 18	Feb. 2	16	·04
		..	..	..	Mar. 20	April 23	35	·27	Mar. 20	April 17	29	·06
		..	..	..	July 17	Aug. 20	35	·32	July 30	Aug. 14	16	·03
		..	..	..	Aug. 24	Sept. 22	30	·26	Aug. 24	Sept. 12	20	·03
,, E.R. 4	Filey Vicarage	Mar. 20	April 6	18	Mar. 20	April 23	35	·25	Mar. 20	April 18	30	·04
		..	..	..	Aug. 1	Sept. 10	41	·40	Aug. 1	Aug. 18	18	·04
,, N.R. 1	West Witton (Ivy House)	Aug. 29	Sept. 12	15	..	..	..	..	Aug. 29	Sept. 12	15	·00
,, N.R. 2	Felixkirk (Mount St. John) ...	..	..	..	..	..	..	..	Jan. 18	Feb. 2	16	·07
		..	..	..	Mar. 20	April 22	34	·33	..	..	..	..
		Sept. 1	Sept. 19	19	July 31	Sept. 19	51	·45	Sept. 1	Sept. 19	19	·00
Durham 2	Sunderland (W. Hendon Ho.) .	..	..	..	Mar. 20	April 21	33	·32	Mar. 20	April 16	28	·07
		..	..	..	..	..	..	..	Sept. 1	Sept. 19	19	·05
Northumber-land. 6	Ilderton (Lilburn Tower Gdns.)	..	..	..	..	..	..	..	June 24	July 8	15	·01
		..	..	..	..	..	..	..	Aug. 29	Sept. 16	19	·08
Westmorland 2	Grasmere (The Wray)	..	..	..	..	..	..	..	Jan. 15	Jan. 29	15	·06
		Nov. 21	Dec. 6	16	..	..	..	..	Nov. 20	Dec. 10	21	·05
Glamorgan .6	Treherbert (Tyn-y-waun)	..	..	..	..	..	..	..	Aug. 23	Sept. 11	20	·03
		..	..	..	..	..	..	..	Dec. 2	Dec. 24	23	·07
Carmarthen .2	Carmarthen (The Friary)	..	..	..	Mar. 20	April 21	33	·26	April 1	April 21	21	·01
		Sept. 2	Sept. 16	15	..	..	..	..	Aug. 29	Sept. 16	19	·04
		Dec. 3	Dec. 24	22	..	..	..	..	Dec. 3	Dec. 24	22	·00
Pembroke ..4	Haverfordwest (Portfield).....	..	..	..	Mar. 20	April 21	33	·21	..	..	..	..
		Aug. 29	Sept. 15	18	..	..	..	..	Aug. 29	Sept. 16	19	·01
Cardigan ...3	Lampeter (Falcondale)	..	..	..	..	..	..	..	April 1	April 21	21	·03
		..	..	..	..	..	..	..	Sept. 2	Sept. 16	15	·01
		Dec. 3	Dec. 24	22	..	..	..	..	Dec. 3	Dec. 24	22	·00

TABLE VIII.—*Droughts and Dry Spells in* 1933—(*con.*).

County and River Division.	Station.	Absolute Droughts.			Partial Droughts.				Dry Spells.			
		Began.	Ended.	Lasted.	Began.	Ended.	Lasted.	Rain.	Began.	Ended.	Lasted.	Rain.
				days			days	in.			days	in.
Denbigh 2	Denbigh (Garn)	..	..	..	Mar. 21	April 25	36	·35	..	..	..	..
		Sept. 2	Sept. 16	15	..	..	..	..	Sept. 2	Sept. 18	17	·02
Merioneth ..4	Dolgelley (Bontddu)	..	..	..	..	..	..	..	Sept. 2	Sept. 16	15	·02
Anglesey	Llanerchymedd (Ll'diarth Es.)	Sept. 2	Sept. 16	15	..	..	..	..	Sept. 2	Sept. 16	15	·00
ISLE OF MAN												
Isle of Man ..	Douglas (Borough Cemetery)..	Sept. 1	Sept. 17	17	..	..	..	..	Sept. 1	Sept. 17	17	·00
CHANNEL ISLANDS												
Guernsey	St. Peter Port (Grange Road) .	Mar. 20	April 11	23	Mar. 20	April 23	35	·34	Mar. 20	April 11	23	·00
		Aug. 23	Sept. 7	16	..	..	..	..	Aug. 23	Sept. 11	20	·02
		..	..	..	..	..	..	..	Dec. 8	Dec. 24	17	·01
SCOTLAND												
Wigtown ...3	Whithorn (Physgill).....	..	..	..	..	..	..	..	June 22	July 6	15	·04
		..	..	..	..	..	..	..	Sept. 1	Sept. 16	16	·03
		..	..	..	..	..	..	..	Sept. 21	Oct. 6	16	·02
Dumfries....3	Dumfries (Crichton Inst.).....	..	..	..	..	..	..	..	Sept. 21	Oct. 6	16	·02
		Nov. 21	Dec. 5	15	Nov. 21	Dec. 28	38	·38	Nov. 20	Dec. 10	21	·06
Peebles 1	Edin. W.W. (Victoria Lodge) .	..	..	..	..	..	..	..	Jan. 15	Jan. 30	16	·02
		..	..	..	..	..	..	..	Nov. 20	Dec. 6	17	·03
Berwick 4	Duns Castle.....	..	..	..	..	..	..	..	Jan. 18	Feb. 2	16	·05
		Mar. 20	April 7	19	..	..	..	..	Mar. 20	April 7	19	·00
		..	..	..	..	..	..	..	June 24	July 8	15	·02
		..	..	..	..	..	..	..	Sept. 1	Sept. 16	16	·04
W. Lothian .2	Linlithgow (Preston House)...	..	..	..	..	..	..	..	Jan. 15	Jan. 29	15	·03
		..	..	..	..	..	..	..	Sept. 1	Sept. 18	18	·04
		..	..	..	Nov. 20	Dec. 27	38	·38	Nov. 20	Dec. 4	15	·06
		..	..	..	..	..	..	..	Dec. 13	Dec. 27	15	·09
Lanarkshire .5	Strathaven (Dungavel)	Nov. 21	Dec. 5	15	..	..	..	..	Nov. 21	Dec. 5	15	·00
Ayrshire 6	Maybole (Culzean Castle) ...	June 20	July 6	17	..	..	..	..	June 19	July 6	18	·03
		..	..	..	..	..	..	..	Sept. 21	Oct. 6	16	·03
Renfrew 3	Greenock (Prospect Hill)	..	..	..	..	..	..	..	Feb. 10	Feb. 24	15	·10
		Sept. 1	Sept. 16	16	..	..	..	..	Sept. 1	Sept. 16	16	·00
		Sept. 21	Oct. 6	16	..	..	..	..	Sept. 21	Oct. 6	16	·00
		..	..	..	..	..	..	..	Nov. 20	Dec. 10	21	·08

TABLE VIII.—*Droughts and Dry Spells in* 1933—(*con.*).

County and River Division.	Station.	Absolute Droughts.			Partial Droughts.				Dry Spells.			
		Began.	Ended.	Lasted.	Began.	Ended.	Lasted.	Rain.	Began.	Ended.	Lasted.	Rain.
				days			days	in.			days	in.
Buteshire ...3	Dougarie Lodge	..	..	..	..	..	..	..	June 19	July 6	18	·03
		..	..	..	..	..	..	..	Sept. 21	Oct. 6	16	·02
Argyllshire 14	Islay (Eallabus)	..	..	..	..	..	..	..	Sept. 19	Oct. 3	15	·04
,, 14	Tiree.....	..	..	..	..	..	..	..	June 21	July 6	16	·05
		..	..	..	..	..	..	..	Sept. 20	Oct. 6	17	·06
Fifeshire 3	Leuchars (Aerodrome)	..	..	..	..	..	..	..	Aug. 2	Aug. 16	15	·07
		..	..	..	..	..	..	..	Sept. 1	Sept. 16	16	·03
Perthshire..11	Aberfeldy (Dall Avon)	..	..	..	Nov. 29	Dec. 27	29	·29	Dec. 9	Dec. 25	17	·09
Kincardine .2	Stonehaven (Mains of Cowie)..	May 25	June 9	16	..	..	..	..	May 25	June 9	16	·00
		..	..	..	..	..	..	..	June 24	July 8	15	·02
		..	..	..	..	..	..	..	Sept. 1	Sept. 16	16	·03
Inverness ...3	Cluny Castle	June 24	July 8	15	..	..	..	..	June 21	July 8	18	·03
		..	..	..	..	..	..	..	Nov. 23	Dec. 10	18	·09
,, ...16	Fort William (The Factory)...	..	..	..	..	..	..	..	Nov. 24	Dec. 10	17	·03
Ross and 3	Fortrose.....	..	..	..	..	..	..	..	Jan. 16	Jan. 30	15	·08
Cromarty		June 21	July 6	16	..	..	..	..	June 21	July 6	16	·00
		Sept. 8	Sept. 22	15	Aug. 24	Oct. 6	44	·38	Aug. 28	Sept. 22	26	·05
		..	..	..	Nov. 20	Dec. 31	42	·37	Dec. 7	Dec. 22	16	·03
,, ,, 7	Ullapool.....	Nov. 23	Dec. 9	17	..	..	..	..	Nov. 23	Dec. 10	18	·02
,, ,, 10	Stornoway (C. Guard Stn.)....	..	..	..	..	..	..	..	June 21	July 8	18	·04
Sutherland .1	Lairg	..	..	..	..	..	..	..	May 25	June 9	16	·03
		June 21	July 8	18	..	..	..	..	June 21	July 8	18	·00
		..	..	..	Aug. 26	Oct. 5	41	·41	Sept. 1	Sept. 17	17	·08
		..	..	..	Nov. 22	Dec. 26	35	·34	..	..	..	..
,, .5	Loch More (Achfary).....	Nov. 24	Dec. 9	16	..	..	..	..	Nov. 22	Dec. 9	18	·02
Caithness ...3	Thurso (Buckies)	..	..	..	..	..	..	..	June 21	July 8	18	·02

TABLE VIII.—*Droughts and Dry Spells in* 1933—(*con.*).

County and River Division.	Station.	Absolute Droughts.			Partial Droughts.				Dry Spells.			
		Began.	Ended.	Lasted.	Began.	Ended.	Lasted.	Rain.	Began.	Ended.	Lasted.	Rain.
IRELAND				days			days	in.			days	in.
Co. Cork ...6	Dunmanway (The Rectory) ..	Aug. 28	Sept. 15	19	..	..	..	..	Aug. 28	Sept. 15	19	·00
,, ..7	Glanmire (Lota Lodge)	..	..	..	Mar. 20	April 21	33	·20	April 1	April 21	21	·03
		..	..	..	..	..	..	..	Aug. 28	Sept. 15	19	·02
		..	..	..	..	..	..	..	Oct. 27	Nov. 10	15	·08
,, ..9	Mallow (Longueville).....	..	..	..	..	..	..	..	April 6	April 20	15	·03
Co. Kerry ..3	Valentia (Observatory)	..	..	..	..	..	..	..	April 1	April 21	21	·05
		..	..	..	..	..	..	..	Sept. 2	Sept. 16	15	·03
		Sept. 24	Oct. 8	15	..	..	..	..	Sept. 24	Oct. 8	15	·00
Co.Waterford 3	Waterford (Gortmore).....	..	..	..	Mar. 20	April 21	33	·10	April 1	April 21	21	·01
Co.Tipperary 1	Nenagh (Castle Lough)	Aug. 31	Sept. 15	16	..	..	..	..	Aug. 27	Sept. 16	21	·06
,, 3	Cashel (Ballinamona)	..	..	..	Mar. 20	April 21	33	·33	Aug. 28	Sept. 16	20	·02
Co. Wexford.4	Gorey (Courtown House)	April 1	April 18	18	Mar. 18	April 21	35	·28	April 1	April 21	21	·01
		Sept. 1	Sept. 16	16	July 18	Aug. 21	35	·35	Aug. 29	Sept. 16	19	·04
Co. Leix 2	Abbey Leix (Blandsfort).....	Sept. 2	Sept. 16	15	..	..	..	..	Sept. 2	Sept. 17	16	·02
Co. Dublin 2	Dublin City (Fitzwilliam Sq.) .	..	..	..	Mar. 20	April 22	34	·30	Mar. 31	April 19	20	·03
		..	..	..	..	..	..	..	July 29	Aug. 20	23	·13
		Aug. 29	Sept. 16	19	..	..	..	..	Aug. 29	Sept. 18	21	·01
Co. Meath ..4	Kells (Headfort).....	..	..	..	Mar. 20	April 21	33	·33	..	..	..	..
Co. West- 1	Mullingar (Belvedere Ho.)	..	..	..	Mar. 20	April 22	34	·34	..	..	..	..
meath		..	..	..	..	..	..	..	Sept. 2	Sept. 16	15	·02
Co. Longford 2	Newtownforbes (C. Forbes Gds.).	Sept. 2	Sept. 16	15	..	..	..	..	Sept. 2	Sept. 16	15	·00
Co. Galway..3	Ballynahinch Castle.....	..	..	..	..	..	..	..	Sept. 23	Oct. 7	15	·02
Co. Ferm'gh. 1	Newtownbutler (Crom. Castle)	..	..	..	..	..	..	..	Aug. 28	Sept. 16	20	·08
Co. Armagh .5	Armagh (Observatory)	..	..	..	..	..	..	..	Sept. 1	Sept. 16	16	·02
		..	..	..	Aug. 28	Oct. 14	48	·43	Sept. 20	Oct. 6	17	·02
Co. Down ..2	Seaforde.....	Sept. 1	Sept. 16	16	..	..	..	..	Sept. 1	Sept. 16	16	·00
		..	..	..	..	..	..	..	Sept. 20	Oct. 6	17	·08
Co. Tyrone .3	Omagh (Edenfel)	..	..	..	..	..	..	..	Sept. 20	Oct. 7	18	·03

4. RAIN SPELLS AND WET SPELLS IN 1933.

The definitions of the terms " rain spell " and " wet spell," as used in this section, are analogous to those of the terms " absolute drought " and " dry spell," which are used in the previous section. Thus :—

A Rain Spell is a period of at least 15 consecutive days to each of which is credited ·01 inch of rain or more.

A **Wet Spell** is a period of at least 15 consecutive days to each of which is credited ·04 inch of rain or more.

In other words, a *rain spell* contains at least 15 consecutive rain days, and a *wet spell* contains at least 15 consecutive wet days.

Table XI contains particulars of all rain spells* and wet spells* during 1933 which were reported from the 100 selected stations of Table V. Stations from which no rain or wet spells were reported are omitted from this table. The number of stations so omitted is 65. Tables IX and X give comparative statistics concerning the rain spells and wet spells since 1917. Similar details of rain spells are available back to 1903 and are given in *British Rainfall*, 1929, p. 30, and averages are therefore available for the 31 years, 1903 to 1933.

In 1933, the total number of rain spells at the 100 stations was only 57 or 111 less than the average. The total number is 93 less than that recorded in 1932 and is much smaller than that for any other year since before 1903. A total of more than 100 rain spells has been recorded in each of the years 1903–1932, the lowest value during this period being 110 in 1909. The mean duration of the rain spells was 18 days, or three less than the average. The mean rain per day during the rain spells was slightly less than the average.

The longest rain spell continued for 31 days from December 11th 1932, to January 10th at Seaforde in Co. Down. Rain spells occurred during 1933 at 35 stations or 35 fewer than the average. A much larger part of the British Isles than usual was, therefore, immune from rain spells.

* The precise procedure adopted in the allocation of rain spells or wet spells which cover parts of two years is set out in the footnote on p. 25, *British Rainfall*, 1926.

One station recorded five rain-spells, *viz.* Skye (Portree), while there were six at Loch More (Achfary).

The total number of wet spells at the 100 stations was only 9 or 42 less than the average. The previous lowest number since before 1917 was 20 in 1931. The mean duration of the wet spells was 16 days, or three less than the average, while the mean rain per wet day was ·34 inch, slightly less than usual. Wet spells occurred at 6 stations or twenty-three fewer than the average. One station recorded three wet spells, *viz.* Skye (Portree). The longest wet spell lasted for 20 days, from October 22nd to November 10th at Loch More (Achfary).

Of the 47 selected stations in England and Wales, only ten recorded a rain-spell during the year. Nine of these stations were in England and recorded one rain spell each, the remaining station being in Wales, *viz.* Llanerchymedd in Anglesey, where two rain spells occurred. Rain spells occurred at twelve of the 28 selected stations in Scotland, these being confined to the northern half of that country, and at thirteen of the 23 selected stations in Ireland.

The latter part of May, the whole of June, the first fortnight of August, and the whole of both September and December were completely free from rain spells at any of the 100 stations.

Rain spells were most widespread during the first three weeks of the year in the north-west of Scotland, from about February 16th to March 10th in the north of Ireland from about April 22nd to May 14th in the south of Ireland, from about October 19th to November 15th in the northern half of Scotland and from November 9th to 28th in the north-east of England.

Wet spells were confined almost entirely to a few stations in northern Scotland. No station in England recorded a wet spell and only one station in Wales and one in Ireland, *viz.* Llanerchymedd in Anglesey and Ballymena, Co. Antrim.

Five of the seven wet spells recorded in Scotland occurred during October and November and the other two during the first fortnights of January and February respectively. The wet spell in Anglesey covered the last week of April and the first week of May whilst that at Ballymena occurred during the 15 days February 19th to March 5th.

The year 1933 was remarkable both for the small number of rain spells and of wet spells. Such spells as did occur were confined to much smaller areas than usual. No rain spell at all was experienced during the year at stations representative of more than half the British Isles and so widespread an immunity from rain spells has not occurred since before 1903.

Table IX.—*Rain Spells* at 100 Stations*, 1917—1933.

Year.	No. of Rain Spells.	DURATION OF SPELLS				STATIONS WITH			
		Mean.		Longest					
		Days.	Mean rain per day.	Days.	Mean rain per day.	None.	1 or 2.	3 or 4.	5 or more.
1917....	152	22	·28	52	·19	30	48	17	5
1918....	186	23	·30	56	·21	21	51	19	9
1919....	143	20	·26	46	·31	29	53	14	4
1920....	165	20	·25	45	·24	32	45	12	11
1921....	184	22	·29	45	·25	31	36	25	8
1922....	170	21	·26	49	·35	30	42	23	5
1923....	222	23	·26	89	·31	17	47	21	15
1924....	168	19	·25	54	·23	33	41	18	8
1925....	176	19	·29	60	·34	27	43	23	7
1926....	194	20	·28	45	·14	21	37	38	4
1927....	206	19	·26	42	·19	21	43	26	10
1928....	202	24	·27	52	·27	28	43	21	8
1929....	157	21	·32	57	·27	19	58	15	8
1930....	174	23	·30	72	·42	32	36	29	3
1931....	121	20	·25	56	·25	49	33	12	6
1932....	150	20	·29	36	·29	37	37	20	6
1933....	57	18	·25	31	·25	65	31	2	2
Average 1903–33	168	21	·27	52	·27	30	42	20	8

* At least ·01 inch each day, 15 days or more.

Table X.—*Wet Spells* at 100 Stations*, 1917—1933.

Year.	Number of Wet Spells.	Mean Duration.		Longest Spell.		STATIONS WITH			
		Days.	Mean rain per day.	Days.	Mean rain per day.	None.	1 or 2.	3 or 4.	5 or more
			in.		in.				
1917....	55	19	·35	31	·46	67	28	3	2
1918....	49	21	·40	36	·44	70	26	4	0
1919....	49	17	·29	33	·34	66	29	5	0
1920....	47	18	·37	31	·61	75	17	8	0
1921....	59	20	·41	29	·32	69	22	9	0
1922....	65	20	·36	42	·28	64	29	7	0
1923....	62	20	·36	42	·39	73	17	8	2
1924....	30	18	·34	24	·37	79	19	2	0
1925....	55	17	·42	31	·18	67	27	6	0
1926....	60	19	·37	30	·48	62	32	6	0
1927....	39	18	·35	24	·29	74	22	4	0
1928....	87	20	·40	39	·29	62	21	17	0
1929....	59	19	·41	33	·40	59	36	4	1
1930....	71	21	·40	35	·51	61	30	9	0
1931....	20	19	·31	32	·44	87	10	3	0
1932....	44	19	·41	30	·50	77	16	7	0
1933....	9	16	·34	20	·49	94	5	1	0
Average 1917–33	51	19	·37	32	·40	71	23	6	0

* At least ·04 inch each day, 15 days or more.

Table XI.—*Rain Spells and Wet Spells in* 1933.

County and River Division.	Station.	Rain Spells.*				Wet Spells.†				Max. in a Day during Rain Spells.	
		Began.	Ended.	Lasted	Total Rain.	Began.	Ended.	Lasted	Total Rain.	Date.	Rain.
ENGLAND AND WALES				days	in.			days	in.		in.
Norfolk....4	Sporle	Oct. 24	Nov. 7	15	3·18	..	..	..	..	Oct. 28	·86
N. Devon ..2	Barnstaple (N. Dev. Athenæum)	27.xii.32	Jan. 15	20	3·12	..	..	..	..	31.xii.32	·65
,, ...3	Okehampton (Uplands)	April 22	May 9	18	4·06	..	..	..	..	May 2	·88
Cornwall ...2	St. Austell (Trevarna)	April 22	May 9	18	4·63	..	..	..	..	April 29	·63
Shropshire ..3	Bishop's Castle (The Vicarage)..	Feb. 20	Mar. 8	17	3·31	..	..	..	..	Feb. 26	·96
Yorks, N.R..2	Felixkirk (Mount St. John)....	Nov. 13	Nov. 28	16	1·88	..	..	..	..	Nov. 17	·40
Durham 2	Sunderland (W. Hendon Ho.)..	Nov. 9	Nov. 27	19	2·46	..	..	..	..	Nov. 15	·32
N'humberl'd 6	Ilderton (Lilburn Tower Gardens)	Nov. 13	Nov. 28	16	2·58	..	..	..	..	Nov. 17	·67
Westmorland2	Grasmere (The Wray)	Feb. 24	Mar. 10	15	7·19	..	..	..	..	Mar. 8	1·99
Anglesey ...	Llanerchymedd (Ll'diarth Es.) .	25.xii.32	Jan. 8	15	2·95	..	..	..	..	Jan. 4	·91
		April 22	May 12	21	2·59	April 22	May 8	17	2·19	May 2	·40
SCOTLAND											
Argyllshire..8	Lochgilphead (Poltalloch) ...	Oct. 4	Oct. 19	16	3·19	..	..	..	..	Oct. 15	·80
,, ...14	Mull (Gruline)	Mar. 28	April 15	19	5·23	..	..	..	..	April 2	1·42
		Aug. 13	Aug. 27	15	6·79	..	..	..	..	Aug. 27	1·73
,, ...14	Tiree	Jan. 2	Jan. 16	15	3·17	..	..	..	..	Jan. 2	·52
Aberdeen ...1	Balmoral (Castle Gardens).....	Feb. 16	Mar. 6	19	2·61	..	..	..	..	Feb. 26	·67
		Oct. 20	Nov. 3	15	6·13	Oct. 20	Nov. 3	15	6·13	Oct. 27	·94
,, ...4	Peterhead (Forehill Works)....	Oct. 19	Nov. 4	17	4·36	..	..	..	..	Oct. 23	·93
Morayshire..2	Fochabers (Gordon Castle)	Oct. 20	Nov. 3	15	5·26	..	..	..	..	Oct. 28	·74

* At least 15 days, each credited with ·01 inch or more.

† At least 15 days, each credited with ·04 inch or more.

Table XI.—*Rain Spells and Wet Spells in* 1933—(*con.*).

County and River Division.	Station.	Rain Spells.*				Wet Spells.†				Max. in a Day during Rain Spells	
		Began.	Ended.	Lasted	Total Rain.	Began.	Ended.	Lasted	Total Rain.	Date.	Rain.
SCOTLAND —(*con.*).				days	in.			days	in.		in.
Inverness..16	Fort William (The Factory)....	26.xii.32	Jan. 10	16	7·36	..	..	..	..	Jan. 2	1·68
		Mar. 29	April 15	18	5·79	..	..	..	..	April 2	1·58
,, ...18	Skye (Portree)	26.xii.32	Jan. 12	18	8·93	26.xii.32	Jan. 10	16	8·52	Jan. 2	1·86
		Jan. 29	Feb. 22	25	6·43	..	..	..	..	Feb. 4	1·62
		Aug. 13	Aug. 27	15	6·86	..	..	..	..	Aug. 27	1·89
		Oct. 3	Oct. 22	20	5·07	Oct. 8	Oct. 22	15	4·88	Oct. 9	1·22
		Oct. 24	Nov. 14	22	6·37	Oct. 24	Nov. 9	17	5·50	Oct. 27	1·00
Ross and Cromarty.7	Ullapool	Jan. 30	Feb. 22	24	5·67	..	..	..	..	Feb. 4	·92
		Oct. 23	Nov. 9	18	4·45	Oct. 23	Nov. 6	15	3·66	Oct. 27	·61
,, 10	Stornoway (C. Guard Stn.)	Aug. 13	Aug. 27	15	5·43	..	..	..	..	Aug. 27	2·75
		Oct. 1	Oct. 19	19	3·21	..	..	..	..	Oct. 9	1·07
		Oct. 24	Nov. 11	19	2·61	..	..	..	..	Oct. 27	·42
Sutherland..5	Loch More (Achfary)	31.xii.32	Jan. 15	16	6·35	..	..	..	..	Jan. 3	1·21
		Jan. 30	Feb. 13	15	5·54	Jan. 30	Feb. 13	15	5·54	Feb. 4	1·18
		Mar. 29	April 12	15	5·51	..	..	..	..	April 2	1·72
		July 9	July 24	16	3·51	..	..	..	..	July 20	·71
		Oct. 3	Oct. 17	15	4·99	..	..	..	..	Oct. 16	·80
		Oct. 21	Nov. 11	22	9·89	Oct. 22	Nov. 10	20	9·85	Oct. 27	1·53
Caithness ...3	Thurso (Buckies)	Jan. 30	Feb. 13	15	2·09	..	..	..	..	Feb. 4	·45
		Oct. 23	Nov. 10	19	4·41	..	..	..	..	Oct. 23	·58

* At least 15 days, each credited with ·01 inch or more.

† At least 15 days, each credited with ·04 inch or more.

Table XI.—*Rain Spells and Wet Spells in* 1933—(*con.*).

County and River Division.	Station.	Rain Spells.*				Wet Spells.†				Max. in a Day during Rain Spells.	
		Began.	Ended.	Lasted	Total Rain.	Began.	Ended.	Lasted	Total Rain.	Date.	Rain.
IRELAND				days	in.			days	in.		in.
Co. Cork....6	Dunmanway (The Rectory).....	April 22	May 13	22	6·21	..	..	..	..	April 22	1·38
		Oct. 6	Oct. 20	15	2·47	..	..	..	..	Oct. 10	·60
,, ...7	Glanmire (Lota Lodge)	April 29	May 13	15	3·27	..	..	..	..	May 6	·67
,, ...9	Mallow (Longueville).....	April 23	May 13	21	4·62	..	..	..	..	May 6	·69
Co. Kerry ..3	Valentia (Observatory.)	28.xii.32	Jan. 19	23	6·22	..	..	..	..	Jan. 2	·85
		April 30	May 14	15	2·87	..	..	..	..	May 3	·69
		Aug. 13	Aug. 27	15	4·08	..	..	..	..	Aug. 27	·96
Co.Tipperary3	Cashel (Ballinamona)	April 22	May 10	19	4·08	..	..	..	..	May 9	·84
Co. Limerick 2	Foynes (Coolnanes)	April 28	May 13	16	3·60	..	..	..	..	May 6	·88
Co. Leix ...2	Abbey Leix (Blandsfort)	26.xii.32	Jan. 10	16	2·27	..	..	..	..	31.xii.32	·44
		April 22	May 10	19	2·30	..	..	..	..	May 2	·42
Co. Mayo ..4	Mallaranny	Oct. 22	Nov. 15	25	4·15	..	..	..	..	Nov. 8	1·02
Co. Sligo ...2	Collooney (Markree Castle)	April 22	May 10	19	2·92	..	..	..	..	April 25	·45
		July 6	July 20	15	2·48	..	..	..	..	July 8	·72
Co. Down...2	Seaforde	*11.xii.32*	*Jan. 10*	*31*	*7·68*	..	..	..	..	*19.xii.32*	*1·11*
		Feb. 19	Mar. 9	19	3·69	..	..	..	..	Feb. 28	·61
Co. Antrim..5	Ballymena (Harryville)	Feb. 19	Mar. 9	19	3·46	Feb. 19	Mar. 5	15	2·71	Mar. 8	·65
Co. Tyrone..3	Omagh (Edenfel)	Feb. 16	Mar. 9	22	3·88	..	..	..	..	Mar. 8	·51
Co. Donegal 3	Milford (The Manse)	Feb. 19	Mar. 9	19	3·17	..	..	..	..	Mar. 3	·48

* At least 15 days, each credited with ·01 inch or more.

† At least 15 days, each credited with ·04 inch or more.

5. DURATION OF RAINFALL IN 1933.

The duration of rainfall is obtained from measurements of the records of autographic gauges. On these records the amount of rain is measured vertically and the duration of the rainfall is measured horizontally, in accordance with scales which are printed upon the charts before they are placed in position in the gauges. The pen of an autographic gauge writes a horizontal line on the record during such time as no rain is falling, and it writes a more or less sloping line whenever rain is passing into the receiver of the gauge.

The duration of rainfall discussed in this section is defined as the length of time during which rain is falling at a rate not less than 0·1 mm. per hour, *i.e.*, ·004 in. per hour. The tabulations at all the official stations are made according to this convention, which was first brought into general use in *British Rainfall*, 1920. It was adopted because during very light rainfall it was found to be almost impossible to decide upon the exact point on the record where the change from " no rain " to " rain " occurred. By taking a definite limiting slope of the trace as the criterion this difficulty is to a great extent avoided and it is found possible to obtain comparable measurements from different gauges and from different observers. The limit of 0·1 mm. (·004 in.) per hour is low enough to ensure that no fall of practical importance is excluded.

The list of stations reporting duration of rainfall for 1933 is given in Tables XII and XIII. These tables have been arranged in this volume so as to give information of the total duration of rainfall and of the mean rate of rainfall for the same stations at one opening. Additional records are included from Hampstead Observatory—maintained by the Hampstead Scientific Society—Ramsgate (East Cliff), Plymouth (The Hoe) and Loughborough (Nanpantan Res.)—maintained by the respective Borough Engineers, —Plymouth (Mt. Batten Aero.) and Manchester (Barton Aerodrome)—both official stations of the Meteorological Office—Snowdon (Cwm Dyli) —maintained by The North Wales Power Co., to whom a Beckley rain-gauge was issued on loan by the Meteorological Office,—Swinton House, Berwickshire—maintained by the Rev. A. E. Swinton—and Crawford (Camps Res.)—maintained by the Lanark County Water Engineer.

The record at Hanwell is omitted owing to the disproportionately large number of records in Middlesex, and that at Billingham-on-Tees is incomplete for 1933

The distribution of the stations in operation at the beginning of 1927 was shown by a map in *British Rainfall*, 1926, p. 36. Central Ireland and northern Scotland are still but sparsely represented, while records of duration from some of the very wet stations in central and northern Wales and the English Lake District would also be particularly valuable.

Table XII sets out the duration of rainfall expressed in hours at 86 stations in the British Isles, for each month and for the whole year of 1933. In this table the durations at Kew Observatory, Eskdalemuir Observatory, Aberdeen Observatory and Valentia Observatory are expressed for monthly periods commencing both at midnight and at 7 a.m. The station with the highest aggregate duration for the year is Glenleven (Blackwater Dam) with a duration of 1,194 hours. This period is equivalent to about 50 days, or about 3 hours per day. Other stations with high aggregates were Snowdon (Cwm Dyli) with 901 hours and Cray Reservoir (Brecon) with 860 hours. The smallest aggregates for the year occurred at stations near London, where rather less than 300 hours, or less than one hour per day, were recorded.

The duration of rainfall reached 150 hours at Glenleven (Blackwater Dam) in January or very nearly 5 hours per day, 140 hours at Cray Reservoir in February and at Glenleven (Blackwater Dam) in October and 130 hours at Cardiff (Penylan) in February, at Glenleven (Blackwater Dam) in August and at Snowdon (Cwm Dyli) in both January and February. The only months during which no station recorded as much as 100 hours of rainfall were May, June, September and December. In *January* the duration exceeded 80 hours in Breconshire, Caernarvonshire, in the west of Scotland, in Shetland and in the south-west of Ireland, while only 23 hours was recorded at Swinton House in Berwickshire. In *February* the duration reached 100 hours at isolated stations in England, in north and south Wales and parts of the west of Scotland. Few stations recorded less than 50 hours, but this occurred near London and in the south-east of England, Felixstowe recording only 22 hours. The duration exceeded 100 hours at Glenleven in both *March* and April and at Cray Reservoir in March. In *April* the duration was less than 20 hours at a number of stations, mainly near London.

In *May* and *June* the totals were generally small, being as little as 15 hours at Lerwick in May and 14 hours at Greenford and Harpenden in June. More than 100 hours was recorded at Glenleven in both *July* and *August*. The duration was, however, small at most other places during these months, the minimum value in July being 11 hours at Felixstowe, whilst in August less than 10 hours was recorded at some stations in the south-east of England, in Wiltshire and in the north of England. *September* was noteworthy for the low

values recorded in Wales, Scotland and Ireland, the duration at Snowdon (Cwm Dyli) and Glenleven being only 30 hours. Two stations in the west of Scotland recorded less than 10 hours and at Armagh the duration was only 8 hours. In *October* the duration was less than 20 hours at certain stations near London and exceeded 90 hours at Falmouth and in the mountainous districts of Wales and Scotland. The duration during *November* was generally small, Ross-on-Wye recording only 8 hours. At Kirriemuir, to the north of Dundee, the duration was, however, as much as 128 hours. The small totals during *December* are especially noteworthy. With the exception of a few isolated stations in Scotland and Ireland, less than 60 hours was generally recorded. Many stations gave less than 20 hours, the duration being as little as 6 hours at stations in and near London and at Sutton Bonington, in Nottinghamshire.

Table XIII sets out the mean monthly and annual values of rate of rainfall at each of the stations of Table XII. The values are obtained by dividing the total fall for the month or year by the duration as given in the preceding table. The mean rates for the year vary from ·093 at Snowdon (Cwm Dyli) to ·032 and ·033 in. per hour at Armagh Observatory and Kirriemuir (Lintrathen) respectively. The highest mean rates were recorded in June and July. The largest values were ·155 in. per hour recorded at Snowdon (Cwm Dyli) in June, ·150 in. per hour at Fulham (Bishop's Park) and ·148 in. per hour at Snowdon (Cwm Dyli), both in July.

A duration reaching or exceeding 20 hours was recorded on one or more of the snow days February 24th–26th at a number of stations in England. The duration reached 24 hours on each of the days at Worthy Down, near Winchester, on the 24th, at Porton, and on the 25th, at Nanpantan Reservoir, near Loughborough and at Rotherham. A value of 23 hours was recorded at Poole on the 24th and at Upper Heyford, Burbage, Sheffield W.W. (Rivelin) and Catterick, Yorks., N.R. on the 25th.

In addition to Worthy Down, two stations recorded 20 hours or more on two successive days, the 25th and 26th, *viz.* Rotherham and Felixkirk (Mt. St. John).

A duration of 20 hours or more was recorded on a number of other days during the year, *viz.*, January 14th, 15th or 16th at stations in the Midlands and north of England, April 24th at Salisbury, August 28th at Snowdon (Cwm Dyli), September 12th at Leatherhead, Kingston-on-Thames, Eastbourne and Worthy Down and November 15th at Cranwell Aerodrome.

At Glenleven (Blackwater Dam) 20 hours or more was recorded on four days, *viz.*, January 31st, February 4th, August 17th and 27th.

Certain additional records have been received too late for inclusion in Tables XII and XIII amongst which may be mentioned Afton Reservoir in Ayrshire with a total duration of 1,161 hours and Skipton (Embsay Moor) in Yorkshire with 501 hours.

Table XII.—*Duration of Rainfall at 86 Stations during 1933. (Monthly and Annual values.)*

For the purposes of this table the month commences either at 7 a.m. or 9 a.m. G.M.T. on the first day of the month and ends at the same hour on the first day of the following month.

County and River Division.	Station.	Pattern of Gauge.	H't. above Sea.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
			ft.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.
London 1	Eltham (High Street).....	Hyeto	245	44	40	44	16	23	19	13	5	33	22	13	11	283
,, ...2	Kensington Palace	Hyeto	80	51	58	52	20	25	18	18	13	42	23	16	17	353
,, ...2	Fulham (Bishops Park).....	Hyeto	15	39	44	37	14	20	17	17	11	39	20	17	6	281
,, ...2	Hampstead Observatory.....	Hyeto	451	53	76	62	22	33	19	16	17	40	23	19	18	398
,, ...2	St. Pancras (Camden Square).	Hyeto	111	46	50	53	19	27	20	17	15	46	29	16	14	352
Surrey 4	Croydon (Aerodrome)	Nat. Syphon	217	69	100	74	22	34	21	28	16	51	38	35	22	510
,, ...5	Leatherhead (Dunard Lodge)	Nat. Syphon	233	63	71	61	18	37	21	28	14	47	31	27	15	433
,, ...5	Kingston (Sewage Works)....	Nat. Syphon	25	55	59	56	19	32	17	24	13	51	27	18	7	378
,, ...5	Kew (Observatory)	Beckley	20	53	60	49	19	29	21	21	14	42	25	18	10	361
† ,, ...5	,, ,,	,,	20	52	61	49	19	29	21	21	10	45	26	18	10	361
Kent 1	Dover (Waterloo Crescent)...	Hyeto	22	71	57	47	39	28	34	18	15	59	29	41	32	470
,, ...1	Dover (Barton Road).....	Nat. Syphon	55	65	38	46	36	32	41	17	8	58	27	31	24	423
,, ...2	Lympne (Aerodrome)	Hyeto	346	73	63	57	32	28	19	17	15	53	31	37	30	455
,, ...2	Ramsgate (East Cliff).....	Nat. Syphon	82	56	(30)	(28)	22	29	21	19	9	52	35	58	24	383
,, ...4	Strood Waterworks.....	Nat. Syphon	112	68	47	77	22	34	19	26	15	42	31	29	19	429
Sussex 5	Eastbourne (Motcombe Gdns.)	N. & Z. Float	59	59	65	48	35	31	30	27	19	63	29	22	29	457
Hampshire ..4	Calshot (Aerodrome)	Nat. Syphon	9	38	80	57	28	28	17	22	14	34	27	15	19	379
,, ..5	Winchester (Worthy D. Aero.)	Nat. Syphon	276	51	108	83	48	31	25	28	13	44	48	19	23	521
,, ..6	Petersfield (Stoner Hill).....	Hyeto	750	60	94	86	42	34	24	33	20	45	35	14	30	517
,, ..8	South Farnborough (R.A.E.).	Hyeto	237	63	88	86	24	39	20	28	10	50	35	16	28	487
Middlesex ...1	Twickenham Sewage Works..	Hyeto	38	35	54	48	15	23	17	18	10	39	19	13	8	299
,, ...1	Hayes Sewage Works.....	Hyeto	124	35	44	44	13	24	16	14	10	36	19	13	8	276
,, ...1	Greenford.....	Hyeto	61	45	53	47	17	26	14	14	12	28	18	17	6	297
,, ...1	Ickenham Sewage Works....	Hyeto	109	43	48	50	17	28	16	15	10	35	21	15	13	311
,, ...1	Wealdstone Sewage Works...	Hyeto	155	44	43	49	18	21	17	15	10	39	20	12	8	296
,, ...1	Edgware (M.C.C. Depot).....	Hyeto	179	44	42	57	20	24	22	17	12	37	19	15	6	315
,, ...2	Palmers Gn. (Broomfield Park)	Casella	138	46	48	56	20	27	20	17	14	31	20	15	10	324
Herts. 2	Barnet Sewage Works.....	Hyeto	297	48	37	46	20	21	17	18	11	41	19	14	6	298
,, ...2	Harpenden (Rothamsted)....	Nat. Syphon	420	54	56	59	16	26	14	16	13	36	26	22	11	349
Oxon. 3	Upper Heyford (Aerodrome)..	Nat. Syphon	408	50	82	55	28	32	36	21	19	40	38	25	16	442

† Values are for periods ending 24h. on last day of month.

Table XIII.—*Mean Rate of Rainfall at* 86 *Stations during* 1933. (*Monthly and Annual values.*)

County and River Division.	Station.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
		ins. per hr.	ins. per hr.	ins. per hr.	ins. per hr.	ins. per hr.	ins. per hr.	ins. per hr.	ins. per hr.	ins. per hr.	ins. per hr.	ins. per hr.	ins. per hr.	ins. per hr.
London.....1	Eltham (High Street).....	·023	·041	·046	·040	·088	·098	·123	·096	·071	·058	·054	·038	·056
,, ...2	Kensington Palace	·025	·035	·043	·040	·068	·090	·109	·042	·067	·067	·061	·023	·050
,, ...2	Fulham (Bishops Park).....	(·026)	·033	·055	·055	·081	·092	·150	·063	·063	·066	·046	·072	(·060)
,, ...2	Hampstead Observatory.....	·035	·022	·039	·059	·061	·065	·084	·038	·067	·063	·056	·022	·047
,, ...2	St. Pancras (Camden Square).....	·029	·029	·043	·044	·063	·092	·053	·038	·065	·054	·056	·026	·048
Surrey 4	Croydon (Aerodrome)	·026	·026	·042	·030	·082	·081	·065	·049	·050	·049	·031	·018	·042
,, ...5	Leatherhead (Dunard Lodge).....	·037	·055	·058	·032	·080	·073	·068	·058	·058	·060	·048	·036	·055
,, ...5	Kingston (Sewage Works).....	·022	·041	·035	·035	·078	·070	·063	·050	·045	·056	·042	·047	·045
,, ...5	Kew (Observatory).....	·026	·044	·044	·034	·063	·092	·084	·046	·062	·055	·052	·032	·050
† ,, ...5	,, ,, ...	·026	·043	·045	·034	·063	·092	·084	·049	·060	·055	·052	·032	·051
Kent.....1	Dover (Waterloo Crescent).....	·032	·036	·033	·039	·053	·096	·060	·049	·101	·061	·061	·026	·053
,, ...1	Dover (Barton Road).....	·039	·057	·035	·043	·053	·072	·073	·108	·119	·079	·066	·038	·063
,, ...2	Lympne (Aerodrome)	·033	·028	·033	·036	·071	·101	·057	·051	·091	·054	·040	·022	·047
,, ...2	Ramsgate (East Cliff).....	·031	·023	(·032)	·028	·038	·095	·083	·058	·105	·050	·043	·022	·051
,, ...4	Strood Waterworks.....	·020	·029	·032	·027	·055	·047	·129	·032	·079	·043	·035	·027	·043
Sussex 5	Eastbourne (Motcombe Gardens) ..	·041	·027	·039	·030	·042	·077	·062	·066	·077	·105	·060	·042	·053
Hampshire.....4	Calshot (Aerodrome).....	·048	·042	·054	·039	·078	·080	·078	·084	·079	·075	·043	·032	·057
,, ...5	Winchester (Worthy D. Aero.)	·045	·044	·047	·022	·054	·104	·092	·084	·069	·048	·041	·021	·051
,, ...6	Petersfield (Stoner Hill).....	·048	·064	·063	·029	·067	·094	·086	·061	·091	·071	·059	·027	·063
,, ...8	South Farnborough (R.A.E.).....	·032	·050	·037	·035	·065	·106	·054	·063	·054	·059	·049	·018	·048
Middlesex 1	Twickenham Sewage Works.....	·034	·052	·044	·044	·106	·108	·082	·055	·058	·075	·057	·040	·060
,, ...1	Hayes Sewage Works.....	·048	·047	·052	·046	·070	·080	·107	·071	·061	·070	·091	·047	·061
,, ...1	Greenford	·043	·045	·051	·037	·074	·149	·071	·063	·083	·084	·076	·073	·063
,, ...1	Ickenham Sewage Works.....	·043	·035	·053	·050	·062	·118	·093	·062	·069	·070	·076	·041	·058
,, ...1	Wealdstone Sewage Works.....	·039	·041	·052	·044	·080	·139	·095	·051	·067	·076	·098	·055	·063
,, ...1	Edgware (M.C.C. Depot).....	·046	·042	·046	·049	·074	·112	·088	·052	·078	·084	·084	·068	·064
,, ...2	Palmers Green (Broomfield Park)..	·038	·029	·043	·043	·061	·086	·077	·041	·067	·073	·062	·047	·052
Herts.....2	Barnet Sewage Works.....	·042	·048	·060	·050	·085	·099	·084	·058	·067	·078	·079	·065	·063
,, ...2	Harpenden (Rothamsted).....	·034	·032	·046	·055	·057	·073	·085	·044	·063	·050	·058	·040	·048
Oxon 3	Upper Heyford (Aerodrome).....	·037	·032	·048	·048	·067	·091	·069	·037	·046	·042	·041	·018	·047

† Values are for periods ending 24h. on last day of month.

Table XII.—*Duration of Rainfall at* 86 *Stations during* 1933—(*con.*).

County and River Division.	Station.	Pattern of Gauge.	H't. above Sea.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
			ft.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.
Essex.....1	Leyton Sewage Works.....	Hyeto	22	39	43	43	19	29	24	18	13	39	22	12	9	310
Suffolk.....2	Copdock	Casella	164	45	32	41	24	26	22	15	13	30	31	41	21	341
,, ...3	Felixstowe (Aerodrome).....	Nat. Syphon	15	46	22	33	24	28	21	11	12	36	31	52	23	339
Wilts. 3	Salisbury (Sewage Works) ..	Nat. Syphon	147	54	77	75	45	28	33	26	6	51	43	18	25	481
,, ...3	Porton (W.D. Ex. Station)...	Hyeto	363	63	68	81	56	27	19	30	8	47	40	12	23	474
,, ...3	Amesbury (Boscombe D. Aero.)	Nat. Syphon	419	62	73	72	40	31	24	23	11	43	48	17	19	463
Dorset.....3	Poole.....	Hyeto	8	42	71	73	36	28	26	22	14	37	21	25	35	430
S. Devon....2	Plymouth (Mt. Batten Aero.) .	Nat. Syphon	82	55	76	60	56	33	31	29	24	28	49	21	33	495
,,.....2	Plymouth (The Hoe).....	Hyeto	117	56	74	64	65	37	28	33	25	23	53	21	30	509
,,.....2	Plymouth (Freedom Park)...	Hyeto	208	62	85	71	52	33	31	35	26	31	53	22	38	539
Cornwall....2	Falmouth Observatory	Beckley	167	70	85	67	60	41	30	35	27	23	96	29	49	612
Hereford....1	Ross-on-Wye.....	Hyeto	224	58	60	37	19	28	29	19	11	37	51	8	21	378
Stafford.....3	West Bromwich.....	Hyeto	543	38	68	47	20	26	37	24	14	12	56	13	12	367
,, ...5	Mayfield.....	Casella	374	61	95	66	32	36	50	38	15	19	75	49	21	557
Warwick....4	Birmingham (Handsworth Pk.)	Hyeto	424	48	85	56	28	28	37	24	14	14	65	11	11	421
,, ...4	,, (Erdington, Sp. Lane)	Hyeto	386	54	79	56	22	24	33	27	14	15	64	21	11	420
Leicester ...4	Loughborough (Nanpantan R.)	Hyeto	269	59	77	62	26	29	41	28	13	40	42	35	12	464
Lincoln 3	Cranwell (Aerodrome)	Nat. Syphon	242	61	72	61	22	42	34	20	10	27	47	51	19	466
Nottingham..2	Sutton Bonington (Agric. Coll.)	Hyeto	159	30	48	47	19	28	24	17	11	20	28	28	6	306
,, 5	Nottingham (Trent Lane)....	Fernley	83	50	62	36	24	32	24	22	11	15	43	27	7	353
,, 5	Worksop (Hodsock).....	Halliwell	56	55	65	26	15	45	39	13	9	21	49	42	10	389
Derby 6	Burbage (Lower Burbage)....	Hyeto	925	66	107	55	31	30	38	28	10	26	69	56	17	533
Cheshire 3	Birkenhead (Bidston Obs.)...	Nat. Syphon	198	34	64	45	28	36	28	25	21	17	60	35	22	415
S. Lancs.....3	Manchester (Barton Aerodrome)	Nat. Syphon	70	..	..	..	..	..	..	..	23	21	83	39	19	..
,, ..3	Bolton (Queen's Park).....	Fernley	342	53	99	74	38	40	41	34	39	15	74	48	21	576
C. Lancs.....2	Leyland (Worden Hall).....	Fernley	125	58	78	60	35	33	39	32	40	17	71	39	15	517
,, ...3	Southport (Hesketh Park)....	Fernley	39	50	67	52	30	26	26	31	29	15	58	36	22	442
N. Lancs. ...4	Lancaster (Greg Observatory).	Beckley	312	55	70	43	24	52	28	42	45	17	67	38	13	494
W.R. Yorks..7	Sheffield W.W. (Rivelin).....	Hyeto	564	64	96	52	27	27	25	22	9	21	62	52	15	472
,, ..7	Rotherham (Aldwarke S.Wks.)	Hyeto	73	59	75	50	27	51	18	16	11	23	51	44	9	434

Table XIII.—*Mean Rate of Rainfall at* 86 *Stations during* 1933—(*con.*).

County and River Division.	Station.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
		ins per hr.	ins. per hr.	ins. per hr.	ins. per hr.	ins. per hr.	ins. per hr.	ins. per hr.	ins. per hr.	ins. per hr.	ins. per hr.	ins. per hr.	ins. per hr.	ins. per hr.
Essex 1	Leyton Sewage Works.....	·030	·026	·049	·037	·066	·113	·054	·040	·070	·100	·064	·048	·056
Suffolk 2	Copdock	·023	·043	·042	·035	·046	·102	·069	·072	·083	·059	·041	·023	·049
,, ...3	Felixstowe (Aerodrome)	·017	·037	·045	·035	·041	·081	·110	·075	·097	·048	·039	·022	·048
Wilts. 3	Salisbury (Sewage Works)	·043	·051	·045	·026	·045	·057	·082	·060	·045	·039	·044	·030	·045
,, ...3	Porton (W.D. Ex. Station).....	·040	·063	·039	·023	·044	·115	·070	·052	·059	·050	·060	·024	·049
,, ...3	Amesbury (Boscombe Down Aero.)	·039	·060	·042	·044	·039	·084	·085	·048	·050	·047	·041	·022	·049
Dorset 3	Poole	·060	·060	·046	·032	·051	·041	·073	·074	·062	·068	·042	·032	·052
S. Devon 2	Plymouth (Mt. Batten Aero.)	·043	·045	·054	·043	·054	·055	·084	·063	·055	·062	·064	·071	·055
,, ...2	Plymouth (The Hoe)	·043	·049	·057	·047	·049	·072	·078	·057	·071	·060	·069	·080	·057
,, ...2	Plymouth (Freedom Park)	·038	·040	·045	·057	·054	·072	·084	·060	·059	·058	·059	·073	·055
Cornwall.....2	Falmouth Observatory.....	·043	·043	·054	·039	·055	·051	·076	·042	·105	·069	·055	·055	·055
Hereford 1	Ross-on-Wye	·039	·058	·067	·056	·067	·069	·092	·048	·076	·069	·071	·033	·061
Stafford.....3	West Bromwich.....	·046	·054	·058	·036	·078	·065	·097	·073	·061	·085	·070	·028	·064
,, ...5	Mayfield	·035	·047	·040	·035	·051	·042	·086	·051	·061	·072	·030	·021	·048
Warwick 4	Birmingham (Handsworth Park) ..	·038	·043	·052	·027	·060	·059	·092	·084	·063	·072	·075	·037	·055
,, ...4	,, (Erdington, Sp. Lane)	·035	·043	·050	·048	·057	·062	·131	·074	·040	·066	·046	·035	·055
Leicester 4	,, Loughborough (Nanpantan Res.) ..	·034	·035	·045	·048	·065	·081	·084	·053	·052	·078	·045	·025	·052
Lincoln.....3	Cranwell (Aerodrome).....	·024	·024	·043	·066	·031	·059	·086	·048	·076	·055	·042	·020	·043
Nottingham.....2	Sutton Bonington (Agric. College)..	·056	·048	·055	·046	·067	·057	·117	·056	·086	·099	·034	·042	·062
,, ...5	Nottingham (Trent Lane).....	·033	·041	·077	·050	·046	·070	·115	·074	·087	·075	·042	·027	·058
,, ...5	Worksop (Hodsock).....	·031	·050	·101	·046	·050	·054	·089	·033	·067	·089	·046	·036	·057
Derby 6	Burbage (Lower Burbage).....	·036	·057	·058	·043	·070	·101	·091	·063	·062	·082	·050	·042	·062
Cheshire 3	Birkenhead (Bidston Observatory).	·035	·042	·043	·031	·048	·076	·053	·087	·050	·060	·038	·027	·048
S. Lancs. 3	Manchester (Barton Aerodrome)...	..	..	..	..	..	..	..	·052	·048	·060	·027	·023	..
,, ...3	Bolton (Queen's Park)	·045	·041	·041	·049	·048	·096	·083	·065	·067	·069	·048	·036	·055
C. Lancs. 2	Leyland (Worden Hall)	·053	·042	·044	·054	·058	·079	·103	·065	·068	·066	·050	·038	·058
,, ...3	Southport (Hesketh Park)	·048	·043	·044	·052	·072	·066	·061	·059	·046	·073	·047	·036	·054
N. Lancs.....4	Lancaster (Greg Observatory).....	·064	·058	·052	·088	·060	·060	·106	·066	·064	·075	·048	·052	·066
W.R. Yorks.....7	Sheffield W.W. (Rivelin).....	·042	·057	·061	·043	·089	·068	·111	·056	·074	·093	·046	·047	·063
,, ...7	Rotherham (Aldwarke Sew. Works)	·035	·051	·047	·040	·043	·061	·100	·045	·061	(·097)	·046	·040	·055

Table XII.—*Duration of Rainfall at 86 Stations during 1933—(con.).*

County and River Division.	Station.	Pattern of Gauge.	H't. above Sea.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
			ft.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.
W.R. Yorks. .9	Haworth (Lower Laithe Res.).	Hyeto	771	69	84	79	49	48	36	40	18	29	85	64	16	617
,, ..9	Earby (Sewage Works).....	Hyeto	426	61	71	32	23	30	28	21	12	16	46	34	17	391
,, ..9	Skipton (Town Hall).....	Hyeto	368	36	70	35	27	38	31	33	17	19	62	45	14	427
N.R. Yorks..2	Felixkirk (Mt. St. John).....	Halliwell	542	62	114	51	34	64	29	24	6	25	60	62	26	557
,, ...2	Catterick (Aerodrome).....	Nat. Syphon	175	63	88	44	24	54	18	30	7	22	50	54	27	481
Glamorgan ..3	**Swansea (Victoria Park)**.....	Hyeto	28	52	81	51	39	28	37	41	21	24	95	24	33	526
,, ..7	Cardiff (Penylan).....	Nat. Syphon	205	65	138	71	52	47	31	39	19	40	69	18	45	634
Brecon.....7	Cray Reservoir.....	Halliwell	1044	95	141	114	52	47	66	96	30	32	112	37	38	860
Flint 1	Sealand (Aerodrome)	Hyeto	17	37	58	50	17	22	25	21	17	11	67	28	15	368
Carnarvon...5	Snowdon (Cwm Dyli).....	Beckley	310	130	131	96	62	42	58	63	76	30	125	39	49	901
Anglesey	**Holyhead (Salt Island)**.....	Hyeto	26	64	59	50	23	44	37	36	40	14	70	50	54	541
Dumfries....5	Eskdalemuir (Observatory) ..	Beckley	794	94	115	68	76	50	32	79	54	20	58	55	64	765
† ,, ...5	,, ,,	,,	794	88	122	68	76	50	32	80	54	20	58	55	61	764
Berwick.....3	Swinton House	Hyeto	200	23	67	22	40	29	18	51	29	17	50	57	46	449
Midlothian ..4	**Boghall (Col. of Agriculture)**..	Hyeto	646	49	66	29	46	43	29	63	19	31	47	46	43	511
Lanark 4	Crawford (Camps Res.)	Nat. Syphon	970	89	(62)	62	50	73	41	53	43	27	49	47	11	(607)
Ayr 3	**Kilmarnock (Kay Park)**.....	‡	132	67	81	49	41	46	29	57	51	9	47	39	30	546
Renfrew 2	Renfrew (Abbotsinch Aero.) .	Hyeto	33	87	106	74	39	69	34	71	55	13	53	67	22	690
,, ...3	**Greenock (Prospect Hill)**.....	Hyeto	200	89	93	61	54	57	36	64	59	9	44	52	27	645
Argyll 4	Glenleven (Blackwater Dam)..	Hyeto	1072	150	129	106	116	86	48	104	136	30	140	86	63	1194
Fife 3	Leuchars (Aerodrome)	Nat. Syphon	30	49	61	42	35	43	29	60	25	22	45	50	30	491
Angus 1	Kirriemuir (Lintrathen).....	Nat. Syphon	700	64	79	70	40	59	42	75	53	39	96	128	97	842
Aberdeen ...2	Aberdeen (Observatory)	Beckley	48	63	95	52	60	21	28	61	24	19	83	80	48	634
† ,, ...2	,, ,, ,,	,,	48	64	96	52	59	22	28	61	24	19	83	80	46	634
Shetland	Lerwick (Observatory)	Hyeto	269	98	55	40	41	15	18	22	51	34	64	49	41	528
Cork.....7	Cork (University College)....	Hyeto	64	86	62	78	28	86	22	37	29	17	37	29	30	541
Kerry.....3	Valentia (Observatory)	Beckley	30	84	47	89	37	83	54	49	61	26	42	50	53	675
† ,, ...3	,, ,, ...	,,	30	81	50	90	37	80	57	49	61	26	41	46	57	675
Armagh.....5	Armagh (Observatory).....	Beckley	209	72	93	76	31	61	42	59	51	8	56	51	68	668
Antrim 5	Aldergrove (Aerodrome)	Nat. Syphon	238	52	79	58	30	44	47	40	35	10	57	46	40	538

† Values are for periods ending 24h. on last day of month.

‡ Private construction.

Table XIII.—*Mean Rate of Rainfall at* 86 *Stations during* 1933—(*con.*).

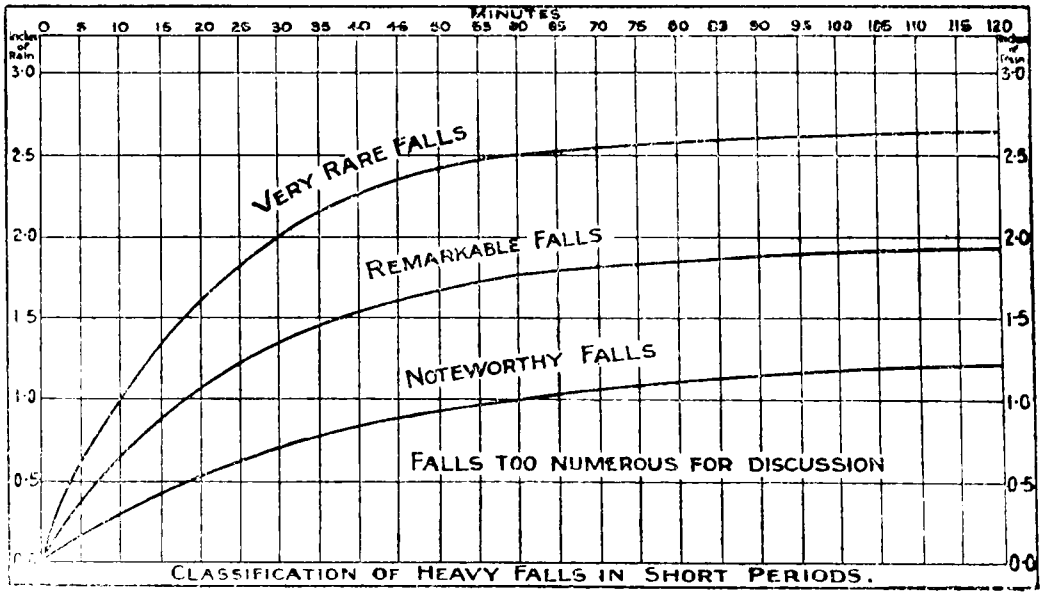
County and River Division.	Station.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
		ins. per hr.	ins. per hr.	ins. per hr.	ins. per hr.	ins. per hr.	ins. per hr.	ins. per hr.	ins. per hr.	ins. per hr.	ins. per hr.	ins. per hr.	ins. per hr.	ins. per hr.
W.R. Yorks. 9	Haworth (Lower Laithe Res.).....	·054	·077	·034	·036	·051	·063	·083	·060	·075	·064	·049	·039	·057
,, ...9	Earby (Sewage Works).....	·049	·057	·073	·055	·055	·085	·136	·066	·136	·077	·043	·027	·066
,, ...9	Skipton (Town Hall)	·053	·061	·056	·048	·049	·082	·087	·049	·075	·051	·046	·033	·058
N.R. Yorks.....2	Felixkirk (Mt. St. John).....	·032	·049	·037	·042	·037	·058	·102	·080	·060	·072	·066	·038	·052
,, ...2	Catterick (Aerodrome)	·022	·045	·036	·045	·051	·044	·056	·051	·082	·061	·048	·024	·045
Glamorgan.....3	Swansea (Victoria Park).....	·057	·059	·056	·059	·062	·059	·100	·074	·062	·093	·056	·054	·068
,, ...7	Cardiff (Penylan).....	·043	·032	·053	·037	·052	·062	·056	·072	·039	·069	·043	·048	·048
Brecon 7	Cray Reservoir.....	·080	·054	·062	·043	·052	·061	·070	·059	·051	·092	·047	·051	·064
Flint 1	Sealand Aerodrome.....	·037	·040	·039	·049	·050	·052	·057	·067	·045	·052	·049	·033	·046
Carnarvon 5	Snowdon (Cwm Dyli)	·093	·075	·067	·059	·083	·155	·148	·076	·089	·116	·088	·064	·093
Anglesey	Holyhead (Salt Island).....	·062	·035	·043	·039	·034	·038	·039	·037	·067	·050	·037	·043	·043
Dumfries 5	Eskdalemuir Observatory.....	·095	·050	·054	·040	·050	·069	·086	·053	·051	·064	·038	·023	·058
† ,, ...5	,, ,,	·088	·057	·054	·040	·050	·070	·086	·053	·051	·064	·038	·022	·058
Berwick 3	Swinton House	·046	·036	·038	·041	·036	·071	·073	·048	·056	·070	·044	·027	·048
Midlothian.....4	Boghall (Col. of Agriculture)	·069	·025	·039	·048	·040	·079	·069	·047	·086	·049	·034	·022	·049
Lanark 4	Crawford (Camps Res.)	·078	(·050)	·047	·033	·053	·056	·078	·052	·081	·087	·046	·065	(·060)
Ayr 3	Kilmarnock (Kay Park).....	·059	·044	·051	·069	·044	·082	·071	·072	·084	·062	·049	·055	·059
Renfrew 2	Renfrew (Abbotsinch)	·056	·032	·031	·052	·038	·067	·040	·038	·050	·046	·034	·027	·041
,, ...3	Greenock (Prospect Hill).....	·097	·053	·065	·055	·064	·086	·059	·059	·079	·072	·064	·056	·067
Argyll 4	Glenleven (Blackwater Dam).....	·094	·056	·058	·064	·043	·083	·062	·065	·092	·066	·045	·035	·063
Fife 3	Leuchars (Aerodrome).....	·040	·035	·030	·033	·028	·039	·048	·027	·078	·069	·034	·039	·041
Angus.....1	Kirriemuir (Lintrathen).....	·036	·040	·030	·042	·028	·042	·049	·024	·055	·032	·027	·020	·033
Aberdeen 2	Aberdeen (Observatory).....	·029	·039	·039	·035	·046	·031	·050	·051	·048	·056	·041	·040	·042
† ,, ...2	,, ,, ,, ...	·029	·039	·038	·035	·046	·031	·050	·051	·048	·057	·041	·041	·042
Shetland.....	Lerwick Observatory.....	·055	·055	·084	·061	·052	·064	·079	·067	·071	·076	·072	·060	·065
Cork 7	Cork (University College)	·042	·036	·035	·093	·053	·074	·054	·057	·092	·056	·093	·055	·054
Kerry 3	Valentia (Observatory).....	·067	·044	·073	·080	·056	·053	·080	·068	·096	·077	·073	·057	·067
† ,, ...3	,, ,, ...	·069	·044	·073	·080	·058	·051	·080	·068	·096	·077	·057	·071	·067
Armagh 5	Armagh Observatory	·030	·031	·027	·028	·042	·051	·047	·030	·018	·036	·018	·024	·032
Antrim 5	Aldergrove Aerodrome	·034	·038	·031	·043	·037	·057	·063	·080	·052	·041	·035	·040	·044

† Values are for periods ending 24h. on last day of month.

6. HEAVY FALLS IN SHORT PERIODS IN 1933.

Heavy falls of rain in short periods are of considerable economic importance, for they are frequently of such intensity as to cause extensive flooding, often accompanied by much surface erosion and structural damage to property. Considerable damage may occur as a result of the accumulation of flood water below the area of heaviest rainfall. The amount of the damage depends on a number of other factors, such as the shape of the catchment area, the nature of the ground and vegetation, whether the water finally flows into the river or sea at high or low tide and the relative positions of the towns. In towns the floods may be aggravated by the failure of the drainage system to cope with the demands made upon it. The information given in this section supplements that in Section 7, Heavy Falls on Rainfall Days, which deals with falls of longer duration causing often more widespread flooding.

Since 1908, this section of *British Rainfall* has contained a classification of intense falls into three categories designated " worthy of notice," " remarkable," and " very rare." The classification has been effected by reference to a diagram of which a copy is reproduced. This diagram indicates by continuous curved lines the upper and lower limits of rainfall which must fall in stated times in order that the fall may be admitted into one of the three categories.



CLASSIFICATION OF HEAVY FALLS IN SHORT PERIODS.

The diagram was prepared almost exclusively from eye observations of rainfall duration and from corresponding measurements of rainfall in ordinary rain-gauges.

On pp. 45, 46 of *British Rainfall*, 1926, it was pointed out that the frequency of intense falls above the curve denoting the limit of noteworthy falls is in actual fact much greater for small intervals of time (*i.e.*, the left-hand side of the diagram) than for larger intervals (the right-hand side of the diagram). On this account, the data of Table XV have been divided into two sections, one giving results from eye observations, which are properly comparable with the diagram, and the other giving results from autographic records, which are not truly comparable with the diagram for falls of short duration.

A complete list of the recorded falls of " very rare " intensity of one hour or less is given in Table XIV, where readings of ordinary as well as of autographic gauges are included. There are three entries for 1933, *viz.*, 2·75 inches in 45 minutes for June 21st at Temple Combe Rectory, 2·50 inches in 25 minutes for June 24th at Silchester House, near Reading, and 2·13 inches in 30 minutes for July 21st at Chatham (Woolman's Wood).

In Table XV particulars are given of falls recorded in 1933 which reached at least the intensity " worthy of notice." Unlike Table XIV, falls of longer duration than one hour are included, the upper limit being two hours. Not more than one entry is made for the same shower for any station. The entry gives the largest amount recorded with a mean intensity " worthy of notice," " remarkable," or " very rare," as the case may be, an entry at the higher rate being in general preferred. Intense falls of less duration than five minutes are not included in the table as in previous years, since in such cases the error is likely to be relatively large and such falls are not usually of practical importance.

In accordance with practice the geographical distribution of the heavy falls of Table XV is given in the following summary. The analysis probably separates the areas of more frequent and intense falls from those relatively immune, although it cannot be expected to indicate the actual relative frequency of intense falls in each area.

Number of Noteworthy Rains of Two Hours' Duration or less.

		England and Wales.								Per cent.
		S.E.	S.W.	N.E.	N.W.	Total.	Scotland.	Ireland.	British Isles.	of records received.
Average 1868-1933		16·8	8·1	4·8	2·7	32·4	2·5	1·7	36·6	1·0
1933	(*a*) ..	14	15	3	3	35	1	0	36	0·7
	(*b*) ..	6	0	2	1	9	2	2	13	0·2
	Sums ..	20	15	5	4	44	3	2	49	0·9

(*a*) Observations made without autographic rain-gauges.
(*b*) Readings of autographic gauges.

Most of the entries occur in south-east and south-west England. There are three entries for Scotland and two for Ireland.

The total number, 49, compares with 57 in 1932 and 104 in 1931. In making the comparison of the two sets of figures with the average values it should be remembered that since 1868 the number of observing stations has steadily increased, while the number of autographic rain-gauges has also increased more especially of recent years. A fairly good indication of the frequency of intense falls in 1933, in relation to the average, is probably provided by comparing the number of observations made without autographic rain-gauges with the average. This indicates that intense falls in short periods in 1933 were less frequent than usual.

Usually about two-thirds of the total number of intense falls on record have occurred in the three months, June, July and August. In 1933 all but seven entries occurred in these months and all but twelve occurred in June and July.

The earliest entry in Table XV is for April 29th. At Malvern (British Camp Res.) the observer measured ·81 inch in 35 minutes during a thunderstorm from 19h. 55m. to 20h. 30m. The only other entries before June are those for May 20th at West Kirby (St. Andrew's Vicarage) in Cheshire and Armagh Observatory where ·24 and ·20 inch respectively fell in 5 minutes. June was remarkable for the persistence of thunderstorm conditions throughout the greater part of the month and entries are given in the tables for the 13th, 15th, 19th, 20th, 21st, 22nd, 24th, 25th and 26th. On June 15th the observer at Ovington Rectory, Hampshire, recorded 2·37 inches in an hour, this fall ranking as " remarkable." Three entries are given in the tables for June 20th, one at Derby (Royal Infirmary) and the other two in the Liverpool area, *viz.*, Litherland (Hatton Hill Park) and Birkenhead (Bidston Observatory). Mr. H. J. Bigelstone, the observer at Bidston Observatory, states that " the storm appears to have travelled from North Wales, passing over Birkenhead and Wallasey, and finally over Liverpool, in the Bootle, Litherland and Seaforth districts of which its greatest violence was reached." (See the *Meteorological Magazine* for 1933, pp. 131-4). There are two entries for June 21st, that for Temple Combe Rectory in Somerset of 2·75 inches in 45 minutes ranking as " very rare," and giving an entry also for Section 7, Heavy Falls on Rainfall Days. There are four entries for June 22nd, three of which rank as " remarkable " *viz.*, Poltimore Rectory near Exeter, with 2·25 inches in 45 minutes, Bartley (The Nurseries) near Southampton with 2·40 inches in 90 minutes and Burbage (Lower Burbage) to the south-west of Sheffield with ·75 inch in 10 minutes. The observer at Poltimore Rectory, Rev. J. H. Hopkinson D.D., states that " This storm fell also on Pinhoe,

but there was no rain 2 miles further on in Exeter; no inhabitant here remembers such a deluge, all roads out of the village for a time impassable." Entries will also be found in Section 7 for Poltimore, Bartley and Dartford on this day. There are three entries for June 24th, one of which, for Silchester House, near Reading, ranks as "very rare," 2·50 inches falling in 25 minutes, the other two ranking as "remarkable," *viz.*, Manor Park (City of London Cemetery) with 1·50 inches in 25 minutes and Spooner Row (Wattlefield Hall) near Wymondham, with 2·05 inches in 45 minutes from 17h. to 17h. 45 m. Further rain fell at Silchester House, Manor Park and Spooner Row giving amounts for inclusion in Section 7. There are two entries for June 25th and three again for the 26th, all three entries on this day being for stations in Worcestershire, two at Malvern and the other at Pershore. Entries are given in the tables for July 7th, 9th, 10th, 11th, 14th, 15th, 16th, 19th and 21st accounting in all for 17 of the total number of entries. On the 15th five entries are given, the most striking being 2·14 inches in one hour from 19h. to 20h. at Aspley Guise near Woburn and ·39 inch in 5 minutes from 18h. 20m. to 18h. 25m. during a thunderstorm at Kensington Palace where the rain commenced at 18h. 12m. and in the following 30 minutes and 112 minutes 1·33 and 1·72 inches fell. Both these entries rank as "remarkable." Four entries are given for the 21st, each station concerned being in Kent, at Chatham (Woolman's Wood) 2·11 inches fell in 30 minutes, which ranks as "very rare," at Maidstone (Brenchley Gardens) and Maidstone (Mill Street) the values were respectively 2·25 and 1·67 inches in the 45 minutes from 18h. 18m. to 19h. 03m. both of which rank as "remarkable."

Entries are given in the tables for August 5th, 6th and 11th. Of the five entries for August, three occurred on the 11th, all at stations in the west country, *viz.*, Warminster (Henford) where the observer reports a "heavy thunderstorm from south-west, ·75 inch falling in 20 minutes, when the storm moved away south-south-east"; Roborough (Maristow Gardens), to the north-west of Plymouth, with 1·40 inches in 35 minutes from 11h. 30m. to 12h. 06m. and Fowey in Cornwall, with 1·70 inches in one hour from 9h. 35m. to 10h. 35m.

Entries are given in the tables for September 22nd and 26th.

There are two entries for the 26th, *viz.*, Street (Overleigh House) in Somerset and Chippenham (Monkton Park) where 4·31 inches fell in 2 hours, this fall ranks as "very rare." A remarkable thunderstorm occurred on the evening of this day over a small area around Fleet in Hampshire giving entries in Section 7, but no notes of heavy falls in short periods are available. The only fall worthy of inclusion in the tables after September was on October 22nd when ·20 inch fell in 6 minutes at South Farnborough (R.A.E.) in Hampshire.

Table XIV.—*Rainfalls of Very Rare Intensity lasting for One Hour or less.*

Year.	Date.	Div.	Station.	Amount.	Duration	Rate per Hour
				in.	H. M.	in.
1912	May 8	XV	Alexandria	·26	0 1½	10·40
1888	Mar. 24	XI	Chepstow, Shirenewton Hall...	·33	0 2	9·90
1917	July 14	IV	Norwich, Ipswich Road.....	·47	0 2½	11·28
1893	Aug. 10	VIII	Preston, Corporation Offices....	1·25?	0 5?	15·00?
1893	June 14	XI	Chepstow, Shirenewton Hall ...	·62	0 5	7·44
1925	May 10	II	Godalming, Charterhouse.....	·60	0 5	7·20
1906	Aug. 2	II	Guildford, Piccard's Rough.....	·89	0 8	6·68
1892	July 3	VIII	Bolton, The Park	1·00?	0 9?	6·67?
1927	Sept. 23	V	Chagford, Dartmoor S'torium ..	1·30	0 10	7·80
1902	May 30	III	Cambridge, Sydney Street.....	1·10	0 10	6·60
1878	June 23	I	St. Pancras, Camden Square...	1·04	0 10	6·24
1912	July 21	VII	Wirksworth, Manor House.....	1·00	0 10	6·00
1918	July 16	II	Purley, Oakwood Avenue	1·10?	0 11	6·00?
1914	Aug. 14	XI	Guernsey, St. Martin's Road...	1·50	0 15	6·00
1878	June 23	I	St. Pancras, Camden Square...	1·43	0 15	5·72
1927	July 11	I	Balham High Road.....	1·50	0 18	5·00
1875	Aug. 7	II	Canterbury, Harbledown.....	2·12	0 20	6·36
1932	Aug. 20	VI	Malvern, Free Library.....	1·86	0 20	5·58
1878	June 23	I	St. Pancras, Camden Square...	1·82	0 20	5·46
1897	June 24	III	Luton Pumping Station.....	1·65	0 20	4·95
1920	May 29	VIII	Leyland, Worden Hall.....	1·65	0 20	4·95
1933	June 24	II	Silchester House	2·50	0 25	6·00
1878	June 23	I	St. Pancras, Camden Square...	2·30	0 28	4·93
1880	July 22	XI	Cowbridge, Ash Hall.....	2·90	0 30	5·80
1915	July 4	XI	Abergavenny, The Chain.....	2·20	0 30	4·40
1933	July 21	II	Chatham (Woolman's Wood)...	2·13	0 30	4·26
1918	July 17	I	Shad Thames Pumping Station.	2·07	0 30	4·14
1895	June 27	IX	Middleton-in-the-Wolds	2·00	0 30	4·00
1902	Sept. 10	II	Surbiton, Vronvelin.....	2·00	0 30	4·00
1931	June 14	VI	Cannock Sewage Works.....	2·35	0 38	3·71
1920	May 25	IV	Hatfield, Broad Oak, Barrington	2·79	0 45	3·72
1933	June 21	V	Temple Combe Rectory	2·75	0 45	3·67
1904	July 27	II	Cooling, Broomy Farm.....	2·66	0 45	3·55
1909	Sept. 29	V	Ilfracombe Reservoir.....	2·50?	0 45	3·33?
1895	June 26	V	Marlborough	2·71	0 50	3·25
1915	June 30	IV	Mildenhall	2·63	0 50	3·16
1903	July 18	VI	Crewe, Betley Hall	2·53	0 50	3·04
1905	July 9	III	Enfield, Carisbrooke.....	2·44	0 50	2·93
1911	May 31	II	Epsom, Ashley Road.....	2·44	0 50	2·93
1901	July 29	II	Wadhurst, Lower Cousley Wood	3·25?	0 55	3·55?
1913	June 17	IV	Elvedon Hall.....	2·85	0 58	2·95
1901	July 12	II	Maidenhead, Lowood.....	3·63	1 0?	3·63?
1903	May 30	II	Beddington Corner.....	3·50	1 0	3·50
1911	May 26	II	Fareham, The Mount.....	3·00	1 0	3·00
1897	July 21	IV	Ipswich, Bishops Hill.....	2·95	1 0	2·95
1932	July 11	VII	Cranwell Aerodrome.....	2·93	1 0	2·93
1895	June 26	VI	Worcester, Diglis Lock.....	2·75	1 0	2·75
1909	June 1	XII	Carsphairn, Shiel.....	2·71	1 0?	2·71?
1873	July 28	XVII	Fettercairn.....	2·60	1 0	2·60
1889	June 7	II	Tonbridge, Ferndale.....	2·60?	1 0?	2·60?
1886	July 25	VIII	Sale, Brooklands.....	2·58	1 0	2·58
1899	July 22	V	Dorchester Water Works.....	2·56	1 0?	2·56?
1875	July 22	V	Trowbridge, Sunnyside.....	2·53	1 0	2·53
1875	June 29	III	Cardington.....	2·50	1 0	2·50
1886	July 25	IX	Wakefield, Stanley Vicarage...	2·50	1 0	2·50

Table XV.—*Heavy Falls in Short Periods in* 1933.

County and River Division.	Station.	Date.	Amount.	Duration.	Rate per Hour.
	(a) EYE OBSERVATIONS		in.	min.	in.
Wilts 3	Salisbury (Manor Road)	June 25	·31	5	3·72
Cheshire 4	West Kirby (St. Andrew's Vic.)	May 20	·24	5	2·88
Kent 1	Dover (Barton Road)	Sept. 22	·43	12	2·15
Cheshire 4	West Kirby (St. Andrew's Vic.)	July 7	·60	15	2·40
Worcs.....1	Malvern (Free Library).....	July 9	·57	15	2·28
Somerset 2	Street (Overleigh House) ...	Sept. 26	·50	15	2·00
Durham 2	Durham (Observatory).....	July 19	·46	15	1·84
Suffolk 4	Yaxley	Aug. 6	1·02	20	3·06
Worcs.....1	Malvern (Free Library)	June 26	1·01	20	3·03
Wilts 3	Warminster (Henford)	Aug. 11	·75	20	2·25
Essex.....2	Manor Park (City of London Cemetery)	June 24	1·50	25	3·60*
Kent 4	Chatham (Woolman's Wood).	July 21	2·11	30	4·22‡
Worcs.....1	Malvern (Barnard's Green) ..	June 26	1·25	30	2·50
S. Lancs.....1	Litherland (Hatton Hill Pk.).	June 20	1·20	30	2·40
Derby 6	Derby (Royal Infirmary).....	June 20	·90	30	1·80
Worcs.....3	Pershore (Southern House)...	June 26	·77	30	1·54
S. Devon.....2	Roborough (Maristow Gdns.).	Aug. 11	1·40	35	2·40
Kent 4	East Malling (Research Stn.).	July 21	1·35	35	2·31
Cornwall 2	Liskeard (Penmilder)	July 15	1·15	35	1·97
Cambridge ...2	Oakington	June 13	1·01	35	1·73
Worcs.....1	Malvern (British Camp Resr.).	Apr. 29	·81	35	1·39
Somerset 7	Temple Combe Rectory	June 21	2·75	45	3·67‡
S. Devon.....6	Poltimore Rectory	June 22	2·25	45	3·00*
Kent 4	Maidstone (Brenchley Gdns.) .	July 21	2·25	45	3·00*
Norfolk 1	Spooner Row (Wattlef'd Hall)	June 24	2·05	45	2·73*
Kent 4	Maidstone (Mill Street).....	July 21	1·67	45	2·23*
Hants 5	Orington Rectory	June 15	2·37	60	2·37*
Beds. 3	Aspley Guise	July 15	2·14	60	2·14*
Cornwall 2	Fowey	Aug. 11	1·70	60	1·70
Kent 5	Dartford (Sewage Works)....	June 22	1·68	65	1·55
Somerset 7	Horsington Marsh	June 21	1·63	80	1·22
Hants 4	Bartley (The Nurseries)	June 22	2·40	90	1·60*
Yorks. N.R. 2	Bedale (The Hermitage)	July 19	1·46	90	·97
Roxborough .3	Ancrum (Monteviot)	July 15	1·23	90	·82
Wilts. 1	Chippenham (Monkton Park)	Sept. 26	4·31	120	2·15‡
Northants ...4	Peterborough (Abbeyfields)..	June 25	1·79	120	·89

* "Remarkable" fall. ‡ "Very Rare" fall.

Table XV.—*Heavy Falls in Short Periods in* 1933—(*con.*).

County and River Division.	Station.	Date.	Amount.	Duration.	Rate per Hour.
	(b) AUTOGRAPHIC RECORDS		in.	min.	in.
London 2	Kensington Palace.....	July 15	·39	5	4·68*
Armagh.....5	Armagh (Observatory)	May 20	·20	5	2·40
Surrey 5	Kew (Observatory)	July 16	·20	5	2·40
Antrim 5	Aldergrove (Aerodrome)	July 10	·20	6	2·00
Lincs. 3	Cramwell (Aerodrome)	July 11	·20	6	2·00
Fife 3	Leuchars (Aerodrome)	July 14	·20	6	2·00
Oxford 3	Upper Heyford (Aerodrome) .	July 15	·20	6	2·00
Hants 8	South Farnborough (R.A.E.)	Oct. 22	·20	6	2·00
Derby 6	Burbage (Lower Burbage) ...	June 22	·75	10	4·50*
Argyll 14	Tiree	Aug. 5	·39	10	2·34
Kent 2	Lympne (Aerodrome)	June 19	·49	15	1·96
Hants. 9	Silchester House	June 24	2·50	25	6·00‡
Cheshire 3	Birkenhead (Bidston Obsy.)	June 20	·79	30	1·58

* "Remarkable" fall. ‡ "Very Rare" fall.

Table XVI.—*Number of Days on which specified amounts of Rain fell in specified times during* 1933.

County.	Place.	0·2 inch.				0·4 inch.				1 inch.			
		6 min. or less.	15 min. or less.	30 min. or less.	60 min. or less.	15 min. or less.	30 min. or less.	60 min. or less.	2 hours or less.	1 hour or less.	2 hours or less.	5 hours or less.	24 hours or less.
London	Camden Square.....	0	0	3	4	0	0	0	0	0	0	0	0
Surrey	Croydon.....	0	1	3	4	0	1	1	1	0	1	1	2
,, ...	Kew Observatory.....	1	2	4	6	0	1	1	2	0	0	0	0
Kent	Lympne	1	4	7	10	1	2	3	6	0	0	1	4
Hants.....	Calshot	1	2	6	10	0	0	1	2	0	0	0	2
,, ...	Worthy Down.....	1	4	7	11	1	1	2	5	0	0	1	3
,, ...	South Farnborough	2	2	4	9	0	1	1	1	0	0	0	3
Oxford	Upper Heyford	1	1	2	7	0	0	0	3	0	0	0	1
Suffolk	Felixstowe	0	4	7	10	0	1	1	3	0	0	0	1
Wilts.....	Boscombe Down	0	0	2	10	0	0	0	2	0	0	0	1
Devon	Mount Batten.....	0	1	3	15	0	0	0	3	0	0	0	1
Lincoln	Cranwell	1	4	5	7	0	0	1	3	0	0	0	2
Lancashire	Southport	0	1	3	7	0	0	0	0	0	0	0	0
N.R. Yorks....	Catterick	0	2	2	4	0	0	2	2	0	0	0	3
Flint.....	Sealand	0	0	1	2	0	0	0	0	0	0	0	1
Anglesey	Holyhead	0	2	3	7	0	0	1	4	0	0	1	3
Dumfries	Eskdalemuir.....	1	2	3	19	1	1	2	8	0	0	2	8
Ayr	Kilmarnock	0	1	4	11	0	0	1	4	0	0	0	4
Renfrew	Renfrew	0	1	1	4	0	0	0	1	0	0	0	1
Fife	Leuchars	1	1	2	6	0	0	0	1	0	0	0	2
Aberdeen.....	Aberdeen	0	0	2	2	0	0	0	0	0	0	0	2
Shetland	Lerwick.....	0	1	3	12	0	0	2	4	0	0	0	1
Co. Kerry	Valentia Observatory ...	0	1	9	21	0	0	0	6	0	0	0	7
Co. Armagh....	Armagh Observatory ...	2	4	4	4	1	1	2	2	0	0	0	0
Co. Antrim	Aldergrove	1	2	4	7	0	0	0	1	0	0	0	1

The falls are not necessarily continuous nor are they always confined to one calendar day. Not more than one fall of each specified amount is credited to any day; if more than the specified amount fell on any day, that part of it which fell in the shortest time is used for the table.

An entry in any of the first three columns under each of the headings 0·2, 0·4 and 1 inch naturally recurs in the column or columns to the right.

In the preceding section the material has been provided both from autographic records and from eye observations at any of the 5,000 rainfall stations. Another method of dealing with the frequency of heavy falls of rain is to confine attention to the stations with autographic records and to examine the traces for all the rain which occurs at these stations. That has been done for the stations set out in Table XVI. In the tabulations on which the classification is based, the shortest interval in which ·2 inch (5 mm.) falls is entered for each day on which so much rain occurs. Similarly with falls of ·4 inch and 1 inch. Cases in which a fall of the given amount occupied parts of two days are included, but each fall counted is of less than 24 hours' duration and only one fall of the given amount is credited to each calendar day. In the classification adopted in Table XVI, the first time limit for each of the stated amounts is nearly in accordance with the specification of a noteworthy fall (*see* diagram) and corresponding entries will be found in Table XV.

7. HEAVY FALLS ON RAINFALL DAYS IN 1933.

The daily measurements of rain which are set out in this Section are (*a*) those of falls of 2·5 inches or more in the rainfall day, and (*b*) those of falls which amount to at least 7·5 per cent. of the total recorded for the year 1933. A fall of 2½ inches in a day at any station is sufficiently remarkable to be noticed, but as such heavy falls are more frequent in the normally wet areas of mountain districts than elsewhere, the criterion of 7½ per cent. was introduced to admit certain falls of less than 2½ inches in areas where the total rainfall for the year is less than 33·3 inches. In this way daily falls which are heavy in relation to the local standard are not neglected. In the case of October 10th 148 entries with less than 2·25 inches have, however, been omitted. This is referred to in the Chronicle. It will be seen that many of the falls noticed, satisfy criterion (*a*), but do not satisfy criterion (*b*). Many of the falls of February 24th to 26th did not reach 2·5 inches, although they were more than 7·5 per cent. of the annual totals. On the other hand very few of the falls of January 2nd and 31st and October 9th exceeded 7·5 per cent. of the annual totals, although they reached 2·5 inches.

The greatest amount measured in a day in 1933 was 6·50 inches, on April 2nd, at Loch Carron (Dunhulladale). The highest percentage was 18·9 per cent. at Fleet (Home Wood), in Hampshire, on September 26th, the amount of the fall being 5·16 inches.

A table showing the absolute maximum daily rainfall and the absolute maximum daily percentage reported for each year from 1865 to 1921 was published in *British Rainfall*, 1921, p. 86. The portion of that table from 1913, completed by the addition of particulars for the years 1922 to 1933, is printed here. This portion contains the highest values shown in the complete table from 1865 to 1933, both as to amount and percentage; these figures are printed in heavy type.

TABLE XVII.—*Maximum Daily Fall and Maximum Percentage, 1913 to 1933.*

Year.	ABSOLUTE HIGHEST RAINFALL.				ABSOLUTE HIGHEST PERCENTAGE.				Year.
	Depth.	Per cent.	Station.	Div.	Per cent.	Depth.	Station.	Div.	
	in.					in.			
1913 ..	6·06?	**26·0?**	Doncaster P.S.	IX	**26·0?**	6·06?	Doncaster P.S.	IX	1913
1914 ..	6·35	4·1	Pen-y-Gwryd	XI	14·8	3·35	Upminster	IV	1914
1915 ..	7·06	19·7	Dalcross	XVIII	19·7	7·06	Dalcross	XVIII	1915
1916 ..	8·20	*5·7	Kinlochquoich.....	XVIII	13·1	3·91	Portland Bill.....	V	1916
1917 ..	**9·56**	..	Bruton	V	21·8	**8·39**	Aisholt	V	1917
1918 ..	4·95	9·2	Douglas	XI	12·3	3·36	Woodsetts Grange....	IX	1918
1919 ..	4·50	5·9	Corran	XV	11·1	3·57	Ayr Cemetery.....	XV	1919
1920 ..	6·81	5·4	Dungeon Ghyll.....	X	15·6	4·69	Elkington Hall	VII	1920
1921 ..	6·10	5·2	,, ,, ...	X	21·3	3·15	Pulham.....	IV	1921
1922 ..	5·14	5·6	Ardgour House.....	XV	16·5	4·70	Doncaster (Carr Ho.).	IX	1922
1923 ..	5·57	3·9	Llechwedd Quarry..	XI	11·6	4·16	Rugeley (Brindley Bk.)	VI	1923
1924 ..	9·40	19·5	Cannington (Brymore)	V	19·5	**9·40**	Cannington (Brymore)	V	1924
1925 ..	*4·13*	*2·8*	Snowdon (No. 9)....	IX	11·4	*2·35*	Boston (Fishtoft S.)..	VII	1925
1926 ..	6·05	9·4	Nantneuadd	XI	10·9	4·57	Pembroke Dock.....	XI	1926
1927 ..	6·00	4·6	Llechwedd Quarry .	XI	*10·7*	4·00	Wolverh'ton Town H..	VI	1927
1928 ..	7·77	5·3	Oakeley Quarry	XI	12·9	3·26	Marton (Southcroft)..	IX	1928
1929 ..	8·31	7·2	Rhondda(L.Wen Res)	XI	19·1	4·01	Rumburgh Vicarage..	IV	1929
1930 ..	5·70	11·0	Castleton	IX	11·0	5·70	Castleton	IX	1930
1931 ..	7·25	9·2	Blaenau-hydfer.....	XI	18·9	6·10	Boston (Black Sluice).	VII	1931
1932 ..	5·33	11·5	Barnoldswick	IX	17·8	5·14	Cranwell Aerodrome	VII	1932
1933 ..	6·50	10·0	L. Carron (Dun'dale)	XVIII	18·9	5·16	Fleet (Home Wood)..	II	1933

The largest entry in each column is shown in heavy type and the smallest in italic type.

Particulars of the eleven largest falls of the year 1933 are given in Table XVIII. The table shows also the year's total at each of the stations and the percentage of that total which is accounted for by the highest daily fall.

TABLE XVIII.—*The largest Daily Rainfalls in* 1933.

Date.	Div.	Station.	Depth.	Per cent. of Year.	Total for Year.
			in.	%	in.
April 2	XVIII	Loch Carron (Dunhulladale)	6·50	10·0	65·18
Jan. 31	X	Watendlath Farm	5·50	8·2	67·05
Feb. 27	XVII	Glen Muick (Inchnabobart)	5·44	12·8	42·34
Sept. 26	II	Fleet (Home Wood)	5·16	18·9	27·24
Jan. 2	XI	Llanbedr-y-Cennin (Llyndulyn)..	4·39	5·6	78·44
Aug. 27	XV	Morvern (Kingairloch)	4·38	5·1	85·88
April 2	XVIII	Loch Arkaig (Glendessary)	4·32	4·9	88·59
Sept. 26	V	Chippenham (Monkton Park) ...	4·31	15·7	27·50
Oct. 9	XI	Cardiff W.W. (Garw-nant).....	4·18	7·3	56·97
April 2	XVIII	Loch Quoich (Kinlochquoich) ...	4·14	—	—
Oct. 10	XI	Swansea (Nantyrwydd)	4·09	7·1	57·63

The total number of heavy falls qualifying for inclusion in this section is 708, but certain entries have been omitted for October

10th as explained later. The number of falls of 3 inches or more in 1933 for England and Wales, Scotland and Ireland, was 125, 22 and 4, compared with 158, 29 and 2 in 1932 and 250, 11 and 9, in 1931.

The number of entries of 4 inches or more during 1933 was 19 compared with 19 in 1932 and 114 in 1931.

In the tables included in the following account of the heavy falls of the year, a daily fall which is the maximum fall for the year at the station is indicated by ordinary roman type; other falls are in *italics*.

CHRONICLE.

The amounts in this section cover the 24 hours commencing at 9 a.m. G.M.T. on the day of entry.

January 2nd.

Devonshire.	*in.*	or %
Holne (Church Park Cott.)	*2·55*	*4·7*
Princetown (H.M. Prison)	*2·89*	*4·2*

Cumberland.	*in.*	or %
Watendlath Farm	*3·05*	*4·5*
Buttermere (Hassness) .	*3·28*	*4·6*
Keswick (Lingholm Gdns.)	*3·29*	*6·4*
Keswick (Derwent Is.) *old*	*3·07*	*6·4*
Portinscale (High Moss) ..	*2·68*	*6·1*

Westmorland.	*in.*	or %
Patterdale Hall	*3·23*	*5·1*
New Dungeon Ghyll Hotel	*3·43*	*4·7*
Grasmere (The Wray)	*3·78*	*5·6*

Glamorgan.	*in.*	or %
Rhondda W.W. (L. Fawr R.)	*2·57*	*3·6*
Rhondda (Castell Nos. R.)	*2·57*	*4·1*
Rhondda (Lluest Wen F.)	*2·65*	*4·4*
Rhondda (Lluest Wen Res.)	*2·86*	*4·2*
Merthyr Tydfil (Penybryn)	3·34	7·9

Carmarthen.	*in.*	or %
Llyn-y-fan Fach (Nant C.)	*3·09*	*4·8*
Llyn-y-fan F. (Troed-y-F.)	2·79	5·5

Brecon.	*in.*	or %
Trecastle (Blaenau-hydfer)	*2·98*	*5·3*

Carnarvon.	*in.*	or %
Llanbedr (Llyndulyn) *old*	3·37	4·9
Llanbedr (Llyndulyn) *new*	4·39	5·6
Snowdon (Llydaw Intake)	*3·55*	*3·3*

Kirkcudbright.	*in.*	or %
Carsphairn (Shiel)	*2·65*	*4·5*
Carsphairn (Knockingarroch)	2·62	6·0

Ayr.	*in.*	or %
Afton Res. (Filters)	3·50	5·3

Dumbarton.	*in.*	or %
Arrochar (Benreoch Tighness)	2·70	4·0

Stirling.	*in.*	or %
Stronachlachar (Invergyle)	3·10	4·6

Argyll.	*in.*	or %
Glenleven (Blackwater D.)	*2·53*	*3·3*
Glenleven (Kinlochleven) ..	*2·70*	*3·6*
Glencrae (Guithas Cott.) ..	*2·69*	*3·7*

Perth.	*in.*	or %
Glengyle	*2·80*	*4·1*
Comrie (Dunira)	2·78	7·5
Glen Almond (Auchnafree)	3·72	7·2
Strath Bran (Glenquaich L.)	2·66	6·9

Inverness.		
Loch Arkaig (Achnacarry).	*2·60*	*4·0*

January 4th.

Westmorland.—Patterdale (Greenside Mine) .....*2·80 in.* or *4·1* per cent.

An exceptionally deep depression centred near Iceland (927·2 mb. at Reykjavik at 7h. on the 3rd) dominated the weather over the British Isles during the first six days of January. Strong winds and gales, from south or south-west, were widespread on the 2nd and 3rd. Entries in this section are confined almost entirely to the 2nd.

In most parts of Ireland the rainfall was about half-an-inch. The rainfall over Great Britain was much less uniform. Falls of more than half-an-inch occurred over the Devon–Cornwall Peninsula, most of Wales, the Lake District, Pennines and most of Scotland apart from a broad strip along the east coast. Falls of more than three inches were confined to parts of South Wales, Snowdonia, the English Lake District, the Southern Uplands and parts of Perthshire and Ayrshire. The largest total occurred at Llyndulyn, just below Carnedd Llewelyn, one of the highest mountains to the north-east of Snowdon. At Afton Reservoir, in Ayrshire, the duration of the 3·5 inches recorded, was 15·8 hours.

January 31st.

Cumberland.	*in.*	or %
Ullswater Hallsteads	2·73	6·4
Caldbeck (Wellbank)	3·05	6·0
Watendlath Farm	5·50	8·2
Buttermere (Hassness)	3·96	5·5
Keswick (Lingholm Gdns.)	3·58	6·9
Keswick (Derwent Island)	*2·90*	*6·1*
Keswick (High Hill)	2·75	6·6
Portinscale (High Moss)	3·30	7·6

Westmorland.	*in.*	or %
Patterdale Hall	3·92	6·2
Patterdale (Greenside M.)	3·55	5·2
Windermere (Holehird)	2·57	5·2
Ambleside (Wansfell)	3·01	5·8
Ambleside (White Craggs)	3·80	7·2
Ambleside (King's School)	3·34	6·6
Ambleside (U.D.C.)	3·91	8·4
Ambleside (Market Sq.)	4·07	7·6
Ambleside (Lesketh How)	3·54	6·2
Rydal (The Stepping St.)	3·46	5·8
Rydal (High Close)	(3·26)	5·5
Rydal (The Hall)	3·43	5·6
New Dungeon Ghyll Hotel	3·30	4·5
Grasmere (The Wray)	*3·75*	*5·6*
Kendal (Greenside)	2·50	6·4
Kendal (Burneside)	2·51	6·2
Kendal (Potterfell)	3·30	5·8
Kentmere Head Reservoir	3·40	4·8
Kentmere	3·04	4·3

Caernarvon.	*in.*	or %
Llanbedr (Llyndulyn)	2·73	3·5
Snowdon (Cwm Dyli)	*2·51*	*3·0*
Snowdon (Llydaw Intake)	4·60	4·3

Kirkcudbright.	*in.*	or %
Carsphairn (Shiel)	2·77	4·7

Dumfries.	*in.*	or %
Evan Water School	3·14	7·4

Stirling.	*in.*	or %
Stronachlachar (Invergyle)	*2·90*	*4·3*

Argyll.	*in.*	or %
Ardgour House	2·90	3·5
Glenleven (Blackwater D.)	3·80	5·0
Glenleven (Kinlochleven)	3·00	4·0
Glen Etive	*3·33*	*4·0*
Bridge of Orchy (Inveroran)	3·80	5·9
Glencroe (Guithas Cottage)	2·80	3·8

Kinross.	*in.*	or %
Milnathort (Ochil Hills)	2·75	7·6

Perth.	*in.*	or %
Loch Dhu	2·65	4·7
Glengyle	3·20	4·7
Glendevon (Frandy)	2·64	5·5
Glen Almond (Auchnafree)	*2·69*	*5·2*
Tyndrum Manse	3·82	5·2
Loch Rannoch (Station)	3·00	6·2

Inverness.	*in.*	or %
L. Quoich (Kinlochquoich)	*3·30*	..
Glenmoriston (Ceannacroc)	3·00	5·6
Loch Arkaig (Achnacarry)	3·06	4·7
Clunes (L. Lochy W.)	2·95	4·5
Glenleven (Blackwater D.)	3·45	4·6
Fort William (Teviot)	2·85	4·6
Fort William (Glasdrum)	2·57	4·3

Ross and Cromarty	*in.*	or %
Glenmoriston (Cluanie Inn)	*2·81*	*3·4*

Mayo.	*in.*	or %
Aasleagh House	3·36	4·0
Delphi Lodge	2·99	3·6

The most widespread heavy rain of January occurred on the 31st. It was associated with the passage of a deep depression across Iceland with strong south-west winds and gales in western and northern districts. The distribution of the rainfall over the country was of the usual orographical type. Rain was general in Ireland, varying from as much as 3 inches in Connemara to less than half-an-inch over a broad strip along the east and south-east coasts. Over Great Britain the contrast was even sharper. More than one inch was recorded over most of Wales, the English Lake District and the western half of Scotland, while many stations recorded no rain at all in the south-eastern half of England and Wales. There was more than 4 inches on Snowdon and near Ambleside. At Watendlath Farm, to the south of Keswick, as much as 5·50 inches was recorded. The largest areas with more than 3 inches occurred in Argyllshire and Inverness-shire, but the total does not appear anywhere to have reached 4 inches.

February 3rd.

Westmorland.—New Dungeon Ghyll Hotel ..... *2·55 in.* or *3·5* per cent.

February 4th.

Westmorland.	*in.*	or %
New Dungeon Ghyll Hotel.	*3·30*	*4·5*

Renfrew.	*in.*	or %
Shaws, W. W. (Com. Res.).	2·51	4·6

Dumbarton.	*in.*	or %
Glen Finlas Res. No. 7.....	2·58	3·8

Argyll.	*in.*	or %
Morvern (Kingairloch)....	*2·61*	*2·9*
Glen Etive	*2·67*	*3·2*
Crarae Lodge.....	*2·58*	*4·5*
Glenbranter	2·85	4·0
Mull (Glencannel).....	*2·74*	3·0

Inverness.	*in.*	or %
L. Quoich (Kinlochquoich).	*2·99*	..

Ross and Cromarty.	*in.*	or %
Loch Carron (Dunhulladale)	*2·66*	*4·1*

The mild unsettled weather which set in at the end of January persisted during the first few days of February. Pressure remained high over southern Europe with depressions passing eastwards or north-eastwards along our extreme northern seaboards. The total rainfall during the seven days January 31st to February 5th at New Dungeon Ghyll Hotel in Langdale was as much as 10·82 inches and at Borrowdale (The Moraine) some six miles to the north-west, 9·01 inches.

February 24th.

Hampshire.	*in.*	or %
Christchurch (Air C. Stn.) .	1·89	8·6
Christchurch (Heron Court)	2·08	8·1
Ringwood (Ashley).....	2·18	7·9
Ringwood (Grey Friars)...	2·35	9·6
Ringwood (Linwood)	2·22	7·9
Fordingbridge (Cuckoo Hill)	2·41	8·5
Swainshill	2·24	7·7

Berkshire.	*in.*	or %
Inkpen (Manor Farm).....	2·12	7·9
Wantage (Lockinge Rec.)..	1·88	8·0
Didcot (Sewage Works) ...	*1·31*	*7·6*

Wiltshire.	*in.*	or %
Market Lavington (Old H.)	2·16	8·6

February 24th—continued.

Wiltshire.	*in.*	or %
Kilmington Rectory.....	2·77	8·1
Longford Castle Gardens..	2·10	8·1
Salisbury (Manor Road)...	2·17	8·6
Salisbury (Atherton House)	1·94	7·7
Woodford Vicarage.....	2·12	8·0
Porton (W.D. Exp'l. Stn.) .	1·91	8·2
Orcheston St. Mary.....	1·92	7·5
West Grimstead.....	2·00	7·6
Marlborough College.....	2·06	7·8
Swindon(Commonweal Sch.)	2·28	8·6

Dorsetshire.	*in.*	or %
Sherborne (Castleton).....	2·20	8·0
Portland Bill (Lighthouse).	1·67	7·7
Portland (H.M. Naval Dep.)	1·75	7·5
Weymouth (Springfield)...	1·57	7·6
Weymouth (Lansdowne V.)	1·61	7·6
Tyneham House	1·88	8·0
Winfrith Rectory.....	2·23	9·1
Wareham (East Holme)...	2·31	9·2
Wareham (The King's B.) .	2·18	8·7
Wareham (Binnegar Hill)..	2·16	8·4
Wareham (Stockford).....	2·00	8·1
Dorchester (Stinsford)	2·10	7·7
Dorchester (Birkin House).	2·09	7·5
Poole	1·92	8·5
Poole (Pitwines Gasworks).	2·12	9·0
Poole (Holton Heath)	2·00	9·0
Parkstone (St. Os. Road) .	1·98	7·7
Parkstone (The Laurels)...	1·91	8·6
Branksome (Alderney Res.)	1·88	8·0
Broadstone (Sewage Works)	1·84	9·0
Tolpuddle Parsonage	1·98	7·6
Puddletown Vicarage.....	2·17	7·7

Dorsetshire.	*in.*	or %
Bere Regis (Barrow Hill)..	2·13	9·0
Bere Regis (Bloxworth Ho.)	2·13	8·0
Broadstone (Grange Road).	1·90	8·6
Wimborne (C. MullenW.W.)	2·08	8·7
Wimborne (Corfe Mullen)..	2·03	8·4
Winterbourne(Whitchurch)	2·29	8·6
Sturminster Marshall	1·98	8·1
Wimborne (Staplehill).....	2·25	9·4
Wimborne (Walsford P.S.).	2·32	9·6
Wimborne (Melbury Lodge)	2·30	9·5
Wimborne (Codford House)	2·04	9·0
Wimborne (Uplands)	2·05	8·8
Blandford (Field's Oak)...	2·57	9·5
Blandford (White Cliffe St.)	2·05	7·7
Blandford (King's Road)..	2·00	7·8
Blandford (Bryanston G.).	2·23	7·9
Wimborne St. Giles.....	2·63	9·9
Gussage St. Michael Manor.	2·24	8·1
Childe Okeford Manor.....	2·31	8·7
Iwerne Minster (Preston H.)	2·53	9·7
Iwerne Minster Vicarage...	2·53	9·7
Sturminster Newton.....	2·25	8·0

Gloucestershire.	*in.*	or %
Broadway (Buckland Man.)	1·52	7·6

Kildare.	*in.*	or %
Straffan House.....	2·70	10·2

Dublin.	*in.*	or %
Dublin (Phœnix Park)....	1·80	8·4

February 25th.

Berkshire.	*in.*	or %
Upton (Manor House).....	1·37	7·8
Didcot (Sewage Works) ...	1·41	8·2
Abingdon (The Firs).....	1·57	8·2

Nottinghamshire.	*in.*	or %
Allerton (Boughton W. W.)	*1·63*	*8·0*
Welbeck Abbey.....	1·95	8·3

Yorkshire.	*in.*	or %
Langsett Moor (Up: Mid.) .	2·43	7·5

Yorkshire.	*in.*	or %
Langsett Moor (Swinden)..	2·66	7·6
Barnsley (Jordan Hill)....	2·00	8·5
Horbury (Addingford Hos.)	2·50	10·7
Adel (Eccup, East).....	2·25	8·0
Middleham (Castle Hill)...	1·82	7·8

Durham.	*in.*	or %
Gainford	2·00	7·9

February 26th.

Nottinghamshire.	*in.*	or %
Elkesley Pumping Station.	*1·57*	*7·8*

Yorkshire.	*in.*	or %
Leeds (Great George St.)	1·76	7·5
Dalton Parsonage	1·94	8·6
Bedale (Snape School)	1·98	8·4
Maunby Hall	2·08	8·6

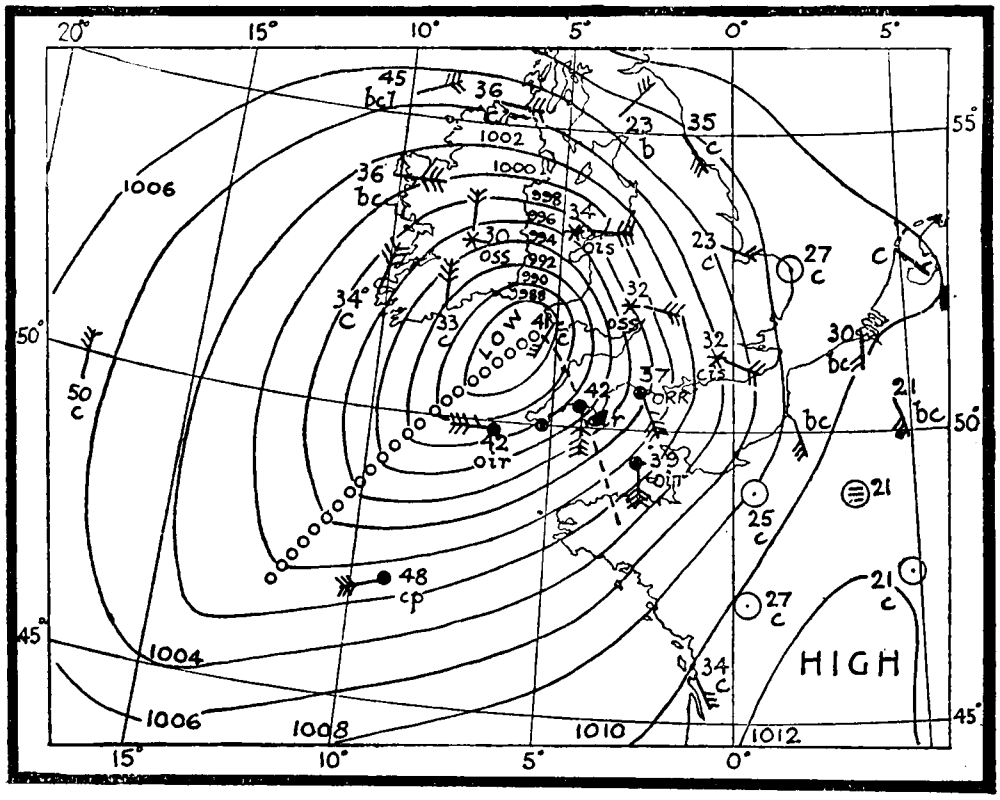
Durham.	*in.*	or %
Staindrop (Raby Castle) *new*	3·18	11·4

Monmouth.	*in.*	or %
Trewyn	2·69	8·1

Glamorgan.	*in.*	or %
Cardiff (St. Fagan's Castle)	2·63	7·6

One of the most striking features of the weather of the year was the great snowstorm of February 23rd to 26th. It began in Ireland and Wales on the evening of the 23rd and during the 24th it spread east and then north beyond the Scottish border. It was continuous for more than 24 hours over the greater part of this area, with the exception of the north, and drifted in an easterly wind which increased to gale force. On the morning of Thursday, February 23rd, the whole of the British Isles was covered with a steady supply of cold air from the Arctic Sea. In spite of the fact that the current was apparently homogeneous and cold up to considerable heights a general fall of the barometer set in, especially in northern districts. At 13h. on February 23rd a small centre of low pressure was situated over the extreme north of Ireland, and a feeble cyclone circulation was set up around it, with some falls of snow and sleet. This disturbance was embedded in the general current of polar air, and at the surface there was no equatorial air within many hundreds of miles. From the meteorological aspect this snowstorm differed fundamentally from many other snowstorms including the famous snowstorm of January 17th to 21st, 1881, which was so severe as completely to cut off the milk supply of London. In the latter case the associated depression had a well-marked "warm sector" on its southern side, consisting of air which had been drawn from low latitudes over the Atlantic. The snow then fell in an easterly gale at a temperature, which for the most part, was much below freezing point. In consequence the snow was very fine and dry and was rapidly blown into deep drifts. Some indications as to the snowfall in Ireland during the snowstorm of February 23rd to 26th are given in the photographs forming the *frontispiece* of this volume. Hacketstown Rectory, Co. Carlow, experienced "a record snowstorm with drifts on the 24th from 6 to 10 feet deep," and Broadford, Co. Clare, had no mail owing to snow-drifts until March 1st. The observer reports that the snow began quietly about mid-day on the 23rd and did not lie on the ground until 15h. 30m. Subsequently it snowed steadily with no wind. After dusk a gale sprang up from the east and the snow fell fiercely and continued all night and until late in the afternoon of the 24th. By 7h. on February 24th the depression had deepened con-

siderably; it was centred at the entrance to St. George's Channel and the cyclone circulation embraced the whole of the British Isles. A weather chart for this period is reproduced. On this chart are shown a "warm" front and a "cold" front, but these fronts cannot be regarded as at all typical, for the air in the sector between them, though rather warmer than that outside the sector, was definitely of polar origin although it had come more recently from the Atlantic just to the west of Ireland. The air of this sector probably provided the avenue whereby the water vapour, which was then falling as snow over the west of England and over Wales, was finding its way



Synoptic Chart, 24th February, 1933, 7h.

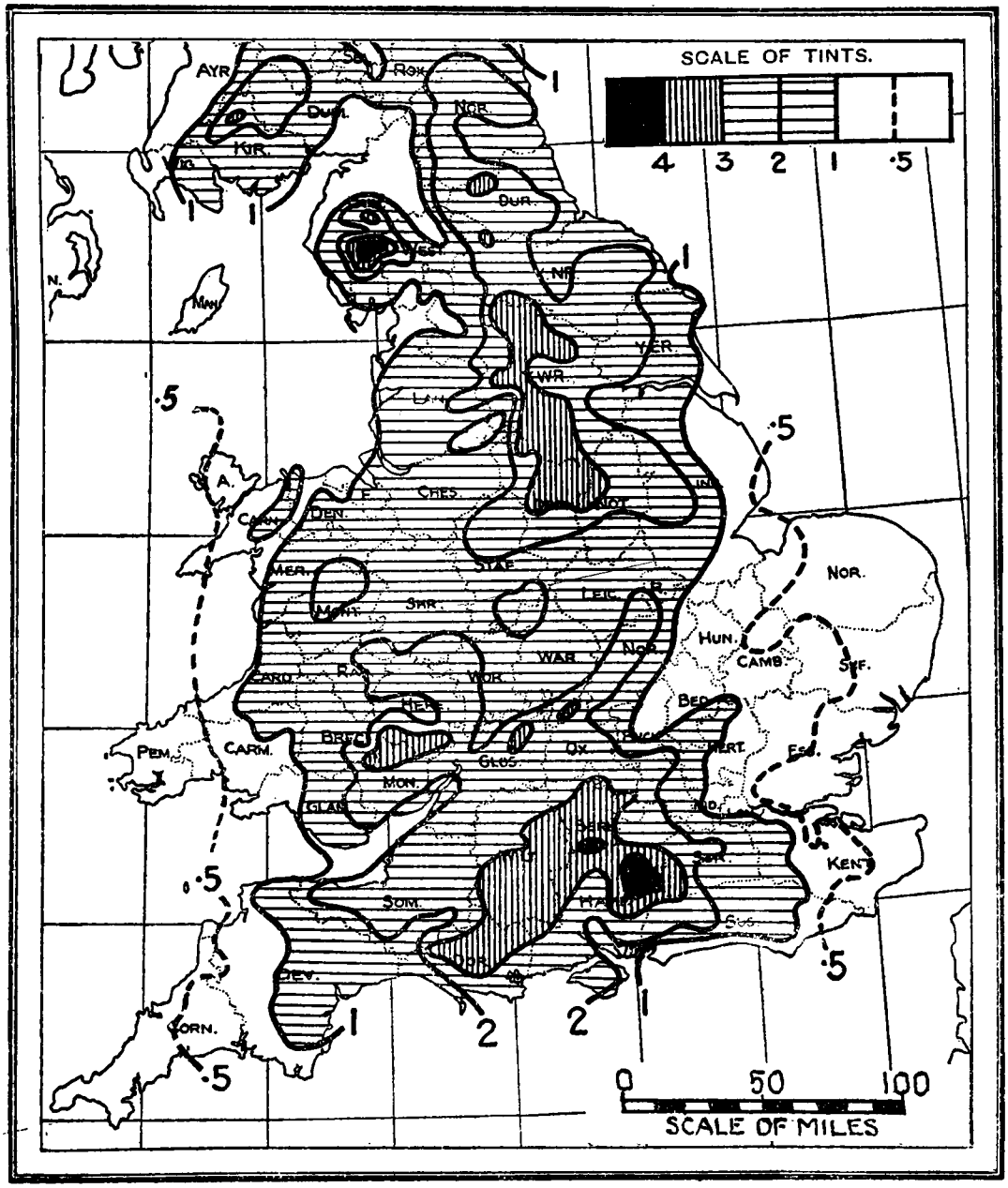
Quasi warm front is indicated by .....
Quasi cold front is indicated by ooooooooooooooooooo

into the depression. Further details of the weather of these four days are given in an article in the *Meteorological Magazine* for March, 1933, from which much of the information given here has been taken.

Mr. R. G. Sandeman forwards the following details of his experiences near Crickhowell, in Breconshire :—

> "The snowfall here on February 24th was a record for more than 20 years. All roads were completely impassable to traffic. Towns in the hills had huge drifts 10 and 14 feet in places. I registered 1·61 inch in the rain-gauge—the snow was 18 inches on the level in the valley. I was up on the

mountains all that morning with local farmers looking for sheep and, although I am about in all weathers, never remember anything like the conditions. The wind was terrific and the drift absolutely choking—it was so bad that one could only see about 20 yards and we were forced to shelter in the rocks on the way down as one couldn't face the drift without choking. I estimated the wind on the summit of the mountain as about Force 9, in the valley only Force 7. All the sheep were smothered and we had to leave them and shelter ourselves. We were almost snowed up when we ventured back, the drifts being 16 feet in the hollows, and it took us nearly 4½ hours to go three miles. I think we were lucky to get back."



Rainfall, 24th to 26th February, 1933.

Neither the distribution nor the amount of the precipitation for the 23rd was remarkable. More than 1 inch was recorded in the Wicklow Mountains and in South Wales including much of Carmarthen, Glamorgan and the south of Cardigan and of Brecon. The precipitation of the 24th was more widespread, but amounts were small from the Fen District to Kent over central and northern Scotland and in the north-west of Ireland. More than one inch was recorded over a large area between Guildford and Southampton in the south and the Mendips and the Cotswolds in the north, as well as to the south-east of Wales, near Bala and over the extreme south of the Pennines. The precipitation for the 25th exceeded 1 in. over a number of areas extending from the Southern Uplands of Scotland and the English Lake District down the middle of England *e.g.*, the Pennines near Alston and Barnard Castle, the Plain of York and the North Yorkshire Wolds, the southern Pennines from Huddersfield to Derby stretching as far east as Lincoln, near Market Harborough, to the north-east of the Cotswolds and over a large area stretching from Winchester to Oxford and including much of the Chilterns. For the 25th and especially the 26th very little rain fell anywhere in Ireland. More than one inch was recorded for the 26th in Sutherlandshire, Forfarshire, the Southern Uplands, the English Lake District, the Pennines stretching across to the North Yorkshire Wolds, near Brecon, Salisbury Plain and to the east of Winchester. The distribution of the precipitation for the three days February 24th to 26th is shown on the map, the largest totals being recorded near Newbury and Basingstoke and in the English Lake District. More than one inch for these three days was also recorded over a large area in the south-east of Ireland, from Dundalk to the Wicklow Mountains, stretching as far east as Killaloe as well as in the eastern half of Scotland from Braemar to Stirling.

February 27th.

Aberdeen.—Glen Muick (Inchnabobart) .....5·44 *in.* or 12·8 per cent.

Inchnabobart is some five miles east of the summit of Lochnager (3,768 feet) in Balmoral Forest.

The heavy rain is confirmed by the observer who also gives some details of the storm. The wind was from the SSE., very strong and accompanied by snow, sleet and rain in torrents.

February 28th.

Down.—Mourne Mtns. (Fofanny R.) .....*3·10 in.* or *5·7* per cent.

The distribution of pressure over Europe and the Atlantic at the beginning of March was not very different from that which accompanied the severe snowstorms of February 23rd to 26th. A series

of depressions extended westwards between latitudes 40° and 50° from the mouth of the English Channel to Nova Scotia, and pressure was high around Greenland and over Russia. But an important change had gradually been taking place. This was the gradual northward and eastward expansion of a belt of mild westerly winds and the transformation of these into south-westerly and southerly winds over Western Europe. By the 8th the Atlantic chain of depressions extended from west of the Azores northwards almost to the Pole ; on their eastern sides, however, there was an uninterrupted flow towards Western Europe of air from sub-tropical regions south of the Azores.

March 8th.

Mayo.	*in.*	or %	*Mayo.*	*in.*	or %
Aasleagh House	*2·80*	*3·4*	Delphi Lodge.....	*2·57*	*3·0*

April 2nd.

Argyll.	*in.*	or %	*Ross and Cromarty.*	*in.*	or %
Ardgour House	*2·61*	*3·1*	Glenmoriston (Cluanie Inn)	2·94	3·6
Glen Etive	3·60	4·3	Loch Carron (Dunhulladale)	6·50	10·0
Bridge of Orchy (Inveroran)	2·50	3·9			
Crarae Lodge.....	2·69	4·7			
Glenbanter	*2·55*	*3·6*			
Inverness.	*in.*	or %			
L. Quoich (Kinlochquoich).	4·14	—			
Loch Quoich (Glenquoich).	3·13	4·2			
Loch Arkaig (Glendessary).	4·32	4·9			

Heavy rain fell in north and north-west of Scotland on April 2nd associated with the passage of a depression to the north-east off our northern seaboard. The total of 6·50 inches recorded at Dunhulladale, to the east of the Island of Skye, has only been exceeded at any station in Scotland on four other occasions, *viz.*, October 2nd, 1890, February 6th, 1894, September, 25th, 1915 and October 11th, 1916. The observer at Dunhulladale notes that the heavy rain was confined to a small area and that it was of long duration, very heavy at times.

May 23rd.

Surrey.	*in.*	or %	*Surrey.*	*in.*	or %
Banstead Mental Hospital.	2·47	11·4	Woking (The Grange).....	2·15	8·8
Sutton (The Ridgway)....	2·25	10·0	Brookwood (Sheets Heath)	2·45	10·5
Carshalton (Park Road)...	1·62	8·1	Old Woking(Sewage Works)	2·30	9·4
Beddington (Sewage Farm)	1·33	8·7	Byfleet(Wisley R.H.S.Gns.)	2·25	9·9
Banstead Grange.....	2·77	9·9	Wisley (Outfall Works)....	2·86	11·7
Sutton (Waterworks)	1·62	7·8	Woking (Knap Hill).....	1·73	7·6

Entries for May 23rd were confined to stations in Surrey. The rain occurred during a thunderstorm and was accompanied in places by hail. At Brookwood in Surrey, 2·45 inches fell in 3½ hours

from 16h. 30m. to 20h. and the observer Capt. H. J. Cann notes that "in spite of being on high sandy soil, everything was a swamp in a very short time."

June 17th.

Carnarvon.—Snowdon (Cwm Dyli) No. 11 .....*2·56 in.* or *3·1* per cent.

A depression which was unusually deep for June, developed rapidly to the south and south-east of Iceland about the 16th and finally moved south-eastward across the British Isles, causing strong winds and unsettled weather. The system was reinforced by others from the Atlantic and an area of low pressure remained over the country until the 22nd, during which period thunderstorms developed over a large area.

Numerous instances of intense falls in short periods during the later half of the month are given in Section 6. Notes on the Thunderstorms of June and of the Thunderstorm on Merseyside, June 20th, 1933 (when a cyclist was drowned as a result of flooding) are given in the *Meteorological Magazine*, 1933, pp. 131-4.

June 20th.

Oxfordshire.	*in.*	or %
Steeple Aston (The Grange)	1·90	8·7
Deddington (Souldern Ct.)	1·84	9·1
W. Adderbury (Ct. End)	1·45	7·5
Adderbury (The Rookery)	1·62	7·9

Northamptonshire.	*in.*	or %
King's Sutton (Manor Ho.)	1·52	8·3

Warwickshire.	*in.*	or %
L. Compton (Weston Pk.)	1·99	9·8

June 21st.

Somersetshire.—Temple Combe Rectory .....2·75 *in.* or 9·2 per cent.

June 22nd.

Kent.	*in.*	or %
Stone (London Mental Hos.)	1·43	8·6
Dartford (Sewage Works)	1·78	10·5

Hampshire.	*in.*	or %
Bartley (The Nurseries)	2·67	9·5

Cambridgeshire.	*in.*	or %
Fulbourn (Mental Hospital)	2·17	10·6
Conington (Conington Hall)	1·76	9·5

Essex.	*in.*	or %
Leytonstone (High Road)	1·44	7·6

Suffolk.	*in.*	or %
Hengrave Hall	1·65	7·6

Devonshire.	*in.*	or %
Poltimore Rectory	3·23	10·4

Staffordshire.	*in.*	or %
Brewood (Belvide Res.)	*2·00*	*7·6*

Worcestershire.	*in.*	or %
Netherton (Lodge Farm R.)	1·59	7·6

Yorkshire.	*in.*	or %
Fewston (Blubberhouses)	3·31	9·4

At Poltimore Rectory, near Exeter, 2·25 inches fell in 45 minutes in the early afternoon.

June 23rd.

Essex.	*in.*	or %	*Essex.*	*in.*	or %
Horndon (E. Sewage Wks.)	1·63	10·1	Hornchurch	1·28	7·6

June 24th.

Hampshire.	*in.*	or %	*Norfolk.*	*in.*	or %
Silchester House	2·52	10·9	Spooner Row (Wattlef'd H.)	2·39	10·3
Essex.	*in.*	or %			
Walthamstow (Ferry Lane)	1·27	7·7			
Manor Park (City Cem.)...	1·90	11·0			

At Silchester House, near Reading, 2·50 inches fell in 25 minutes.

June 25th.

Northamptonshire.	*in.*	or %	*Northamptonshire.*	*in.*	or %
Peterborough (Abbeyfields)	1·79	9·0	Peterborough (Milton Park)	1·71	8·4

The heavy fall of 2·36 inches, recorded at Ballina (The Rectory) in Co. Mayo, July 8th, is also worthy of comment. The observer notes the occurrence on that day of three of the worst thunderstorms within living memory.

July 15th.

London.	*in.*	or %	*Bedfordshire.*	*in.*	or %
Kensington (Holland Ho.).	2·18	11·6	Aspley Guise	2·24	10·0
Kensington (Campden Hill)	1·74	9·9			
Fulham (Bishop's Park)...	1·38	8·1	*Norfolk.*	*in.*	or %
			Hingham	1·77	7·8
Northamptonshire.	*in.*	or %	*Warwickshire.*	*in.*	or %
Sywell Hall.....	1·88	9·1	Astley Vicarage.....	1·66	7·6

July 16th.

Lincolnshire.—Blankney Hall Gardens.....1·92 *in.* or 7·6 per cent.

The head gardener at Blankney Hall, to the south of Lincoln, reports that the heavy rain occurred about 18h. and lasted about 30 minutes. The intense rain was very local but considerable flooding occurred locally.

July 20th.

Kent.	*in.*	or %	*Kent.*	*in.*	or %
Stoke	2·24	12·8	Higham Waterworks.....	1·92	9·8

July 21st.

Kent.	*in.*	or %	*Kent.*	*in.*	or %
Maidstone (Mill Street)....	1·67	7·8	Trosley Pumping Station..	1·71	7·5
Maidstone (Brenchley Gns.)	2·25	9·1	Chatham (Woolmans Wood)	2·11	9·9
Maidstone (Allington Lock)	2·15	10·1			

August 11th.

Devonshire.	*in.*	or %
Chagford (Fernworthy)....	2·81	5·3
Chagford (Metherall).....	2·89	5·8
Chagford (Thornworthy)..	3·05	5·8
Chagford (Dartmoor San.).	3·98	8·8
Chagford (Huish).....	3·45	8·4

Cornwall.	*in.*	or %
Wendron (Ninemaidens)...	2·65	5·9

The heavy rain of August 11th was associated with the passage of a shallow depression off north-west Spain to the north-east causing thunderstorms over the southern half of England. At Dartmoor Sanatorium, near Chagford, the thunderstorm commenced about noon and continued intermittently until the end of the day but roughly 3 inches fell between 11h. and 13h.

August 27th.

Argyll.	*in.*	or %
Morvern (Kingairloch)....	4·38	5·1

Ross and Cromarty.	*in.*	or %
Stornoway (C. G. Stn.)....	2·75	7·9

Mayo.	*in.*	or %
Aasleagh House.....	3·01	3·6
Delphi Lodge.....	*2·91*	*3·5*

The following comments are taken from the *Irish Times* of August 29th :—

" Sunday night was a night of terror for the people of Erris, County Mayo, where crops were destroyed and bridges swept away by the heavy rains. Several people were forced to flee from their homes near Glencastle. Rain fell in a deluge from mid-day until midnight in Erris, and all crops along the swollen rivers were ruined. Glenamoy bridge was swept away, dislocating traffic between Belmullet and Ballycastle. Muingnabo bridge was also demolished, cutting off the countryside from Belmullet. Dooyork bridge, Geesala was also demolished. With three rivers flowing into the inlet of the sea near Glencastle the sea rose to an abnormal height, and residents along the coast, as well as those on the sides of the rivers, left their homes in terror. The Glencullen area has suffered an irreparable loss of crops as a result of the swollen river.

The retaining embankment of a loch, from which Stornoway, Isle of Lewis, draws its water supply, collapsed over a space of 20 feet on Sunday night as a result of exceptionally heavy rain, and the waters, after carrying away three footbridges, invaded the Castle policies, where four bridges were destroyed, and a considerable length of carriage-way washed into the river. Houses were flooded, some to a depth of two feet. Damage was done to crops in all parts of the island."

August 28th.

Carnarvon.—Snowdon (Llydaw Intake) .....*3·00 in.* or *2·8* per cent.

September 12th.

Kent.	*in.*	or %
Brenchley (The Warren)...	1·80	7·6
Sevenoaks (Knole Park)...	1·80	7·5

Hampshire.	*in.*	or %
Ventnor (Cemetery)	1·98	7·8
Brighstone Rectory	1·97	8·1

Hampshire.	*in.*	or %
Brighstone (Pitt Place) ...	1·95	9·3
Ryde (Perivale).....	2·18	8·2
Ryde (West Street).....	1·98	7·7
Ryde (Esplanade Gardens).	1·84	7·8
Wootton (Fernhill).....	1·91	7·5

September 12th—continued.

Hampshire.	*in.*	or %	*Hampshire*	*in.*	or %
East Cowes (Spring Hill)	1·75	7·6	Portchester (Noel Cottage)	1·55	7·7
Exbury	1·65	7·8	Farlington (P. Stn.) *new.*	1·87	8·2
Fawley (Cadland Park)	2·02	8·3	Farlington (F. Works) *new*	1·84	8·4
Alverstoke (Monckton Ho.)	1·65	7·5	Southampton (Portswood)	1·47	7·5
Alverstoke (Glencoe)	1·60	7·5	Otterbourne W. W.	2·20	8·1
Gosport	1·70	7·9	Twyford (Pumping Station)	2·22	8·0
Lee-on-Solent (Edin.H.Sch.)	1·94	9·5	Winchester (Shawford)	2·14	7·7

A depression over the north-west of France and the Bay of Biscay moving north-east caused rain in the south of England, where at many stations a drought worthy of mention in Section 3 was terminated. Thunderstorms broke out in France in the late afternoon of the 11th and developed into continuous rain, which at 7h. on the 12th was falling over a large belt from the south-east of England, across France and Switzerland to North Italy. A southerly upper-current brought the rain from France to England. The rain of this day in the south-east of England was prolonged rather than intense and the sudden break up of the fine spell in that area was noteworthy. More than half an inch was recorded over a large area stretching from Dartmoor to the Kentish coast and reaching as far north as Banbury. There was more than one inch near Yeovil and over a large area from Andover to Maidstone in the north and from the Isle of Wight to Hastings in the south. At Ventnor and Winchester rather more than 2 inches fell. No rain at all fell over the country to the north of a line roughly from the Severn Estuary to the Wash, and in many places the drought continued until the 16th or later.

September 21st.

Kent.	*in.*	or %	*Kent.*	*in.*	or %
Hythe	1·74	7·5	Wingham Boys' School	1·91	9·8
Hythe (Douglas Avenue)	1·73	8·0	Ramsgate (East Cliff)	2·04	10·5
Saltwood (Cylinder)	1·99	8·1	Broadstairs (Collis Ct. Rd.)	1·79	8·3
Newington (The Grange)	2·00	7·9	St. Peter's (Hildersham Ho.)	1·81	7·6
Shepherdswell (Upton Lo.)	2·19	8·5	Birchington (Hollydene)	1·90	11·0
Barham (Old House)	1·85	8·3	Margate (Cliftonville)	1·52	8·6
Barham Pumping Station	1·96	8·9			
Worth (Upton House)	2·02	8·3			
Worth (Felder Lodge)	2·14	9·9	*Essex.*	*in.*	or %
Wingham (Margate W. W.)	1·73	8·2	Southminster (New Moor)	1·04	8·6

In most parts of the country no rain at all was experienced and falls of half an inch or more were confined to the south-east of a line drawn roughly from Chelmsford, Shoeburyness, Gravesend, Maidstone and Hastings. To the east of a line from Herne Bay to Dungeness more than one inch fell, while near Ramsgate and Deal there was more than 2 inches. The heavy rain was associated with a secondary depression which developed to the south of the Straits of Dover at about 7h. on the 21st. At Ramsgate and Dover the duration of rainfall was 13 hours.

September 23rd.

Huntingdonshire.	*in.*	or %
Catworth (School House) .	1·36	7·8

Lincolnshire.	*in.*	or %
Stainby Rectory	1·76	8·3
East Heckington.....	1·64	8·1
Leasingham Rectory.....	1·55	8·3
Cleethorpes (Kings Parade)	1·60	7·6

Yorkshire.	*in.*	or %
Hull (Pearson Park)	*1·86*	*7·8*

Carmarthen.	*in.*	or %
Llanelly (Cwmlliedi W. W.)	2·61	6·5

September 24th.

Kent.	*in.*	or %
Sandgate.....	1·69	7·7
Folkestone (Borough San.).	2·18	8·5
Newington (The Grange)..	*1·92*	*7·6*
Folkestone (Lower Standen)	1·86	7·8
Ramsgate (Archer House).	1·50	7·9

Essex.	*in.*	or %
Dovercourt	1·23	8·0

Suffolk.	*in.*	or %
Felixtowe (Aerodrome)....	1·25	7·6

At Ramsgate the duration of rainfall for the 24th was 13 hours as on the 21st. The total rainfall at Ramsgate for the five days, September 20th to 24th was 3·91 inches and at Broadstairs 4·23 inches.

September 26th.

Hampshire.	*in.*	or %
Alice Holt Forest.....	3·64	11·9
Long Sutton (Agric. Coll.).	2·07	7·6
South Warnboro' (Vine C.)	2·08	7·9
Upton Grey (Hoddington)	2·01	7·5
Odiham (Sewage Works)..	2·42	9·4
Greywell (Pumping Stn.)..	2·45	10·2
Hook (Nately Hatch).....	2·46	9·3
Fleet (Crookham)	4·25	..*
Fleet (Winchfield).....	4·02	16·6

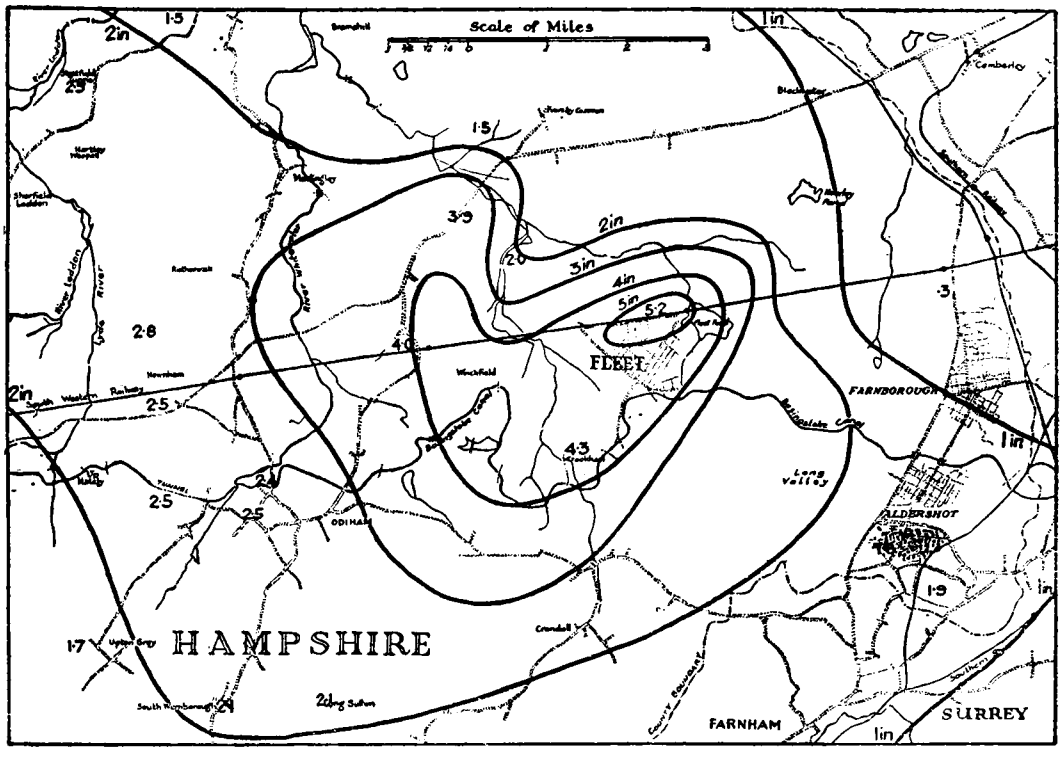
Hampshire.	*in.*	or %
Fleet (Home Wood).....	5·16	18·9
Rotherwick (Tylney Hall).	2·81	11·5
Hartley Wintney (Co. Cff.)	3·90	15·3
Bramley (Street Farm Ho.)	2·70	11·5
Stratfield Turgis (Byland's)	2·46	10·2

Wiltshire.	*in.*	or %
Chippenham (Monkton Pk.)	4·31	15·7
Grittleton	3·03	10·4

*Record not received for inclusion in the General Table.

Thunderstorms developed in the Midlands and southern England in a warm damp easterly current from the Continent. The intense thunderstorm rain which occurred during the evening of September 26th is of special interest, not only because of the large amounts recorded, but also because of its occurrence late in the year. Mrs. L. M. Kent, of Fleet, who drew attention to the storm originally in a letter to *The Times* of September 29th, gives the times of the rain as from 15h. to 19h. Major R. E. Fryer, at Winchfield, gives between 15h. 30m. and 19h. 30m., while the Surveyor and Sanitary Inspector at Hartley Wintney sends the following details:—" Light rain commenced to fall at 15h. 30m., heavy rains accompanied by very heavy thunder and vivid lightning continued incessantly from 16h. to 18h. 20m. There was a cessation for 10 to 15 minutes, when heavy hail, followed again by heavy rains, continued until 19h. 35m. Light rain fell until 19h. 40m. after which there was nothing beyond a slight drizzle." The distribution of the rainfall of this day is shown on the

accompanying map. At South Farnborough, four miles east of Fleet, the total rainfall was only ·30 inch. So far as can be ascertained more than 3 inches fell over 21 sq. m., more than 4 inches over 7 sq. m., and more than 5 inches over half a square mile. The whole of this rain occurred within 4½ hours.



Rainfall, 26th September, 1933.

Thunderstorm rains occurred over a wide area in the south of England on this day. At Monkton Park, near Chippenham, where 4·31 inches was recorded, heavy rain occurred from 15 h. to about 17h., but subsequently there was another storm lasting about 10 minutes.

October 8th.

Mayo.—Delphi Lodge.....*2·54 in.* or *3·0* per cent.

The anticyclonic conditions which prevailed during the first six days of October gave way fairly rapidly to very disturbed conditions. The heavy rain on October 8th followed a period of 14 days at Delphi Lodge with only ·12 inch, and commenced a period of 24 days there with as much as 9·90 inches.

October 9th.

Herefordshire.	*in.*	or %	*Worcestershire.*	*in.*	or %
Humber Rectory.....	*1·86*	*8·3*	Shelsley Beauchamp.....	*1·68*	*8·0*
Leominster (Hennor)	*1·64*	*7·7*	Stourport (Astley Town)..	*1·52*	*7·8*
			Stourport (Lincombe Lock)	1·70	8·7

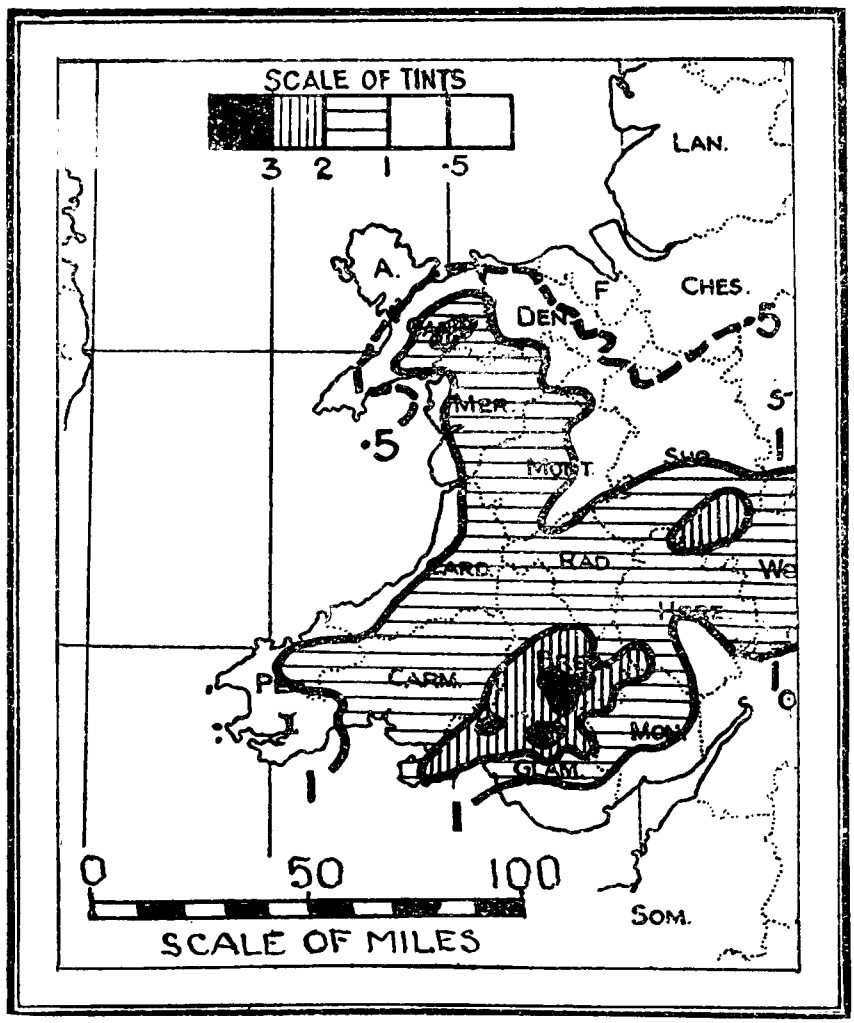
October 9th—continued.

Glamorgan.	*in.*	or %
Clydach (Wernfadog).....	2·63	6·1
Ystalyfera (Wern House)..	*2·95*	*5·5*
Neath (Cimla Reservoir)...	2·64	6·6
Rhondda W.W. (Llyn F.R.)	3·83	5·4
Pontardawe (P. Cilybebyll)	3·82	7·6
Treherbert (Tyn-y-waun)..	*3·30*	*4·9*
Rhondda (Castell Nos Res.)	*3·27*	*5·2*
Rhondda (Lluest Wen F.)..	*3·22*	*5·4*
Rhondda (Lluest Wen Res.)	*3·52*	*5·2*

Brecon.	*in.*	or %
Ystradgynlais (Yniscedwyn)	*2·75*	*6·0*
SwanseaW.W.(Nantyrwydd)	*2·88*	*5·0*
Ystradfellte Reservoir....	3·54	6·1
Aberdare (Nanthir Res.)...	2·51	5·1
CardiffW.W. (Garwnant)..	4·18	7·3
Cardiff W.W. (Cantreff R.)	*3·70*	*6·9*

Brecon.	*in.*	or %
Cardiff W.W. (Beacons R.)	3·31	5·7
Cardiff W.W. (Storey Arms)	3·70	5·4
Taf Fechan (Neuadd No. 1)	3·67	6·1
Taf Fechan (Neuadd 1A)	4·08	6·2
Taf Fechan (Neuadd No. 4)	3·87	6·0
Taf Fechan (Neuadd No. 11)	3·72	6·1
Taf Fechan (Neuadd 11A)	3·72	5·8
Talybont (Ffynonwen)....	*2·70*	*5·7*
Talybont (Aberclydach)...	3·16	8·3
Talybont (Ashford).....	*2·96*	*7·9*
Brecon (Tairbull School)...	2·82	6·7
Black Mtns. (Blaen-y-cwm)	*2·54*	*5·8*
BlackMtns.(DamS.GrwyneF.)	*2·67*	*5·8*

Inverness.	*in.*	or %
Loch Arkaig (Glendessary).	*2·60*	*2·9*



Rainfall, 9th October, 1933.

The widespread rainfall of the 9th and 10th was associated with a deep depression centred to the south of Iceland, which deepened considerably and moved slowly to the north-east during the period 9th to 11th. At the same time an associated secondary depression moved rapidly across the country in a north-easterly direction. Strong winds or gales occurred over a large area. Some rain fell over most of the country on the 9th, but the amounts were small in the south-east of England. Falls of more than one inch were recorded in Connemara, the Western Highlands of Scotland and over most of Wales. The diagram shows the distribution of the rainfall over Wales. The rainfall exceeded two inches over a large part of South Wales, as well as in part of Shropshire and on Snowdon.

October 10th.

Devonshire.	*in.*	or %
Princetown (H.M. Prison)	2·92	4·2
Chagford (Fernworthy)	*2·78*	*5·3*
Chagford (Metherall)	*2·70*	*5·4*
Ilfracombe (Reservoir)	2·51	6·6
Hartland (Fosfelle)	2·61	7·9

Gloucestershire.	*in.*	or %
Forest of Dean (Mailscot Lo.)	2·42	7·9
English Bicknor (BicknorH.)	2·33	8·6

Herefordshire.	*in.*	or %
Kentchurch Rectory	2·50	8·6
Dorstone (Oaklands)	2·53	8·5
Sarnesfield Court	2·46	10·4
Weobley School	2·55	10·9
Pembridge (Moor Court)	2·30	10·2
Pembridge (Burton Court)	2·64	11·0
Kington (Lynhales)	2·36	10·0
Kington (Hill Court)	2·27	9·1
Humber Rectory	2·29	10·2
Leominster (Fairholme)	2·74	12·2
Kimbolton (Grantsfield)	2·34	10·9
Byton Rectory	2·29	9·5

Shropshire.	*in.*	or %
Bitterley Grammar School	2·40	9·2
Culmington Manor	2·25	9·2
Bridgnorth (Coton Hall)	2·55	10·9
Madeley C. E .Schools	2·25	9·6

Staffordshire.	*in.*	or %
Wolverhampton(Dim.W.W.)	2·28	10·8
Wolverhampton(Copthorne)	2·56	10·9
Wolverhampton (West Pk.)	2·47	10·7
Tettenhall (The Hollies)	2·25	9·6

Staffordshire.	*in.*	or %
Shifnal (Weston Park)	2·49	10·4
Maer Hall Gardens	2·26	8·7
Wednesfield (Co. School)	2·72	11·9
Bloxwich (Sneyd Reservoir)	2·75	11·7
Chasetown	2·25	9·2
Brewood (Slade Heath P.S.)	2·26	9·8
Bishopswood	2·39	11·3
Milford Waterworks	2·27	9·3
Stafford (Vic. Pleasure Gd.)	2·46	9·5
Yarlett Hall	2·91	11·3
Standon (Hatton W.W.)	2·54	9·1
Stone (Alleyne's G. Sch.)	2·57	10·5
Longton (The Meir)	2·28	8·3
Rocester (Dove Leys)	2·33	8·5
Oakamoor (Lightoaks)	3·10	10·9
Mayfield	2·54	9·6
Ilam School	2·80	7·9
Cheddleton (Co. Ment. Hos.)	2·36	8·3
Alstonfield (The Manor)	3·42	10·8

Lincolnshire.	*in.*	or %
Ferriby Sluice	2·68	12·0
Wroot (S. Level PumpStn.)	2·46	11·2
Crowle(N.Level Pump Stn.)	2·81	11·8
Crowle (Snowdrop Villa)	3·11	13·2

Nottinghamshire.	*in.*	or %
Sutton-in-Ashfield (Rushley)	2·27	9·9
Bawtry Hall (The Gardens)	2·36	9·9
Bawtry Council Sch.	2·35	10·0

Derbyshire.	*in.*	or %
Ashbourne Vicarage	2·66	9·3
Etwall (Blakeley Lodge)	2·50	11·3
Etwall Hall	2·80	10·8
Mickleover (C. Mental Hos.)	2·82	11·5

October 10th—continued.

Derbyshire.	*in.*	*or* %
Derby (Wild Street)	2·29	9·1
Mackworth Vicarage	2·51	10·5
Breadsall Priory	2·43	10·0
Duffield (The Kirkstyles)	2·67	10·0
Belper (Herbert Strutt Sch.)	2·45	9·8
Belper (Quarry Bank)	2·33	10·7
Ambergate Reservoir	2·35	10·0
Wirksworth	2·59	11·2
Whatstandwell (Meerbrk.)	2·53	9·1
Brackenfield (Lindway Res.)	2·47	10·1
MatlockBath(Lower Tower)	2·50	9·4
Matlock (Rockside Hydro)	2·58	9·8
Darley Dale (Whit. Inst.)	3·69	13·5
Chatsworth Gardens	2·36	9·3
Titheacre (Baslow)	2·78	9·7
Baslow (Over End)	2·74	11·2
Holmesfield (Barbrook Res.)	2·52	8·6
Codnor (Cross Hill)	2·47	9·7
Codnor Park	2·30	9·7
Chesterfield (Walton San.)	2·59	11·8
Chesterfield (Linacre Res.)	3·11	12·2
Chesterfield (Linacre Res.)	2·95	11·8
Chesterfield (Sewage Works)	3·40	14·5
Chesterfield (Crowhole R.)	2·61	10·6
Horsley Gate	2·70	9·4
Spinkhill (Mt. St. Mary's C.)	2·82	12·3

Yorkshire.	*in.*	or %
Rossington Main Colliery	3·25	13·3
Rotherham (Ulley Res.) (2)	3·05	12·9
Rotherham (Ulley Res.) (3)	3·05	12·4
Wincobank (Sewage Works)	2·25	9·7
Doncaster (Pumping Stn.)	2·47	9·5
Goole	2·31	9·3
Hull (Pearson Park)	2·25	9·5
Hull (Springhead)	2·58	10·3
Cottingham (Waterworks)	2·86	11·1
Beverley(E.R. Mental Hos.)	2·45	8·7
Beverley (New Walk)	2·35	8·6
Market Weighton (Dalton)	2·38	8·8
Bridlington (Corpn. Nur.)	2·38	9·9
Bridlington (Grammar Sch.)	2·31	10·1

Monmouth.	*in.*	or %
Blackwood	2·55	7·9
Abertillery (The Park)	3·89	8·7
Tredegar Laboratory	2·05	6·8
Ebbw Vale (Iron Works)	3·09	7·4
Newport W.W. (L'vaches)	2·32	8·3
Newport W.W. (N.-y-pridd)	2·44	8·0
Newport W.W. (New'ch)	2·50	7·8
Abersychan (Glansychan)	2·73	6·4

Monmouth.	*in.*	or %
Blaenavon (Estate Office)	3·78	7·7
Abergavenny (Plas Derwen)	2·93	8·0
Abergavenny (Penpergwm)	2·60	7·7
Abergavenny (Ty Clyd)	2·61	7·0
Abergavenny(RichmondRd.)	3·06	9·1
Abergavenny (Larchfield)	2·91	8·9
Grosmount	2·60	8·6

Glamorgan.	*in.*	or %
Felindre (Blaennant Ddu)	3·12	7·4
Felindre (Lower Lliw Res.)	2·70	6·8
Felindre (Upper Lliw Res.)	3·01	6·6
Ystalyfera (Wern House)	3·30	6·2
Rhondda W.W. (Llyn F.R.)	*3·78*	*5·3*
Pontardawe (P. Cilybebyll)	*2·95*	*5·9*
PortTalbot (Twyn-yr-hydd)	2·53	7·1
Port Talbot (Groeswen)	2·60	7·9
Maesteg (Isolation Hosp.)	2·96	6·1
Pontycymmer	3·72	6·5
Pontycymmer (Garw Sec.S.)	3·72	6·4
Ogmore Vale	3·93	6·8
Pontypridd (Treforest Sch.)	3·93	8·4
Pontypridd (Lan Wood R.)	3·98	9·1
Pontypridd (Llanfabon)	4·08	8·5
Ystradyfodwg (Tyntyla H.)	2·91	7·4
Treharris Service Reservoir	3·83	10·0
Mountain Ash (Darranlas)	3·68	7·5
Mountain Ash (M'dderwen)	3·80	8·3
Treherbert (Tyn-y-waun)	3·99	5·9
Rhondda (Castell Nos Res.)	4·04	6·5
Rhondda (Lluest Wen F.)	3·80	6·4
Rhondda (Lluest Wen Res.)	4·08	6·0
Dowlais (Gwernllwyn)	3·13	8·3
Dowlais (Garth Filter Beds)	3·30	6·8
Rhymney Bridge Reservoir	3·28	7·1

Carmarthen.	*in.*	or %
Llyn-y-Fan Fach (Nant C.)	3·37	5·3
Llyn-y-Fan Fach(T.-y-Foel)	*2·77*	*5·4*
Llandeusant (Pontcrynfe)	2·63	6·3
Llanelly (Filter Beds)	2·53	6·3
Llanelly (Cwmlliedi W.W.)	*2·57*	*6·4*
Llanelly (Upper Lliedi Res.)	2·68	6·4

Brecon.	*in.*	or %
Ystradgynlais(Yniscedwyn)	3·10	6·7
Swansea W.W.(Nantyrwyd)	4·09	7·1
Ystradfellte Reservoir	*3·14*	*5·4*
Aberdare (Nanthir Res.)	3·21	6·6
Taf Fechan (Pontsticill)	3·09	6·4
Cardiff W.W. (Llwyn Res.)	3·11	6·3
Cardiff W.W. (Garwnant)	*3·41*	*6·0*
Taf Fechan (Pentwyn Res.)	3·46	6·5

October 10th—continued.

Brecon.	*in.* or %	
Cardiff W.W. (Cantreff R.)	*2·93*	*5·4*
Cardiff W.W. (Beacons Res.)	*3·10*	*5·4*
Cardiff W.W. (Storey Arms)	*3·36*	*4·9*
Taf Fechan (Neuadd No. 1)	*3·11*	*5·2*
Taf Fechan (Neuadd 1A)	*3·30*	*5·0*
Taf Fechan (Neuadd No. 4)	*3·24*	*5·0*
Taf Fechan (Neuadd 11)	*3·04*	*5·0*
Taf Fechan (Neuadd 11A)	*3·12*	*4·8*
Ebbw V. W.W. (L'gynidr) 1	3·51	6·8
EbbwV.W.W.(L'gynidr)W.3	3·66	7·1
Ebbw Vale W.W. (Llangynidr) N.W. 2	3·61	7·1
Ebbw Vale W.W. (Carno S.)	3·66	7·2
Ebbw Vale W.W. (Carno E.)	3·52	6·9
Ebbw Vale W.W.(Carno W.)	3·61	7·0
Ebbw Vale W.W. (Carno N.)	3·59	7·1
Brecon.	*in.* or %	
Talybont (Ffynonwen)	3·31	6·9
Talybont (Aberclydach)	*2·76*	*7·2*
Swansea W.W. (Cray Rs.)	3·75	6·8
Talybont (Ashford)	2·97	8·0
Trecastle (Blaenau-Hydfer)	3·04	5·5
Brecon (Tairbull School)	*2·64*	*6·2*
Battle (Penoyre)	2·74	7·1
Black Mtns. (Blaen-y-cwm)	2·83	6·5
Black Mtns. (Dam Site Grwyne Fawr)	2·87	6·3
Cathedine Rectory	2·35	8·9
Talgarth (Arfryn)	2·28	7·6
Radnor.	*in.* or %	
Llyswen (Llanstephan Ho.)	2·39	7·9

During the 10th practically no rain fell over Scotland, Ireland or the south-east of England. Heavy rain was confined to a broad strip across the country from Lands End to Flamborough Head. Falls extending 2 inches were widespread, while more than 3 inches was recorded in South Wales, and over small areas stretching from the southern Pennines almost to Hull. The rainfall distribution for this day is shown in the diagram. In this case only falls reaching or exceeding 2·25 inches have been included in the table. Small falls have been omitted even if they have provided more than 7·5 per cent. of the total rainfall for the year. In this way 93 falls of less than 2·00 inches were omitted and 148 falls of less than 2·25 inches.

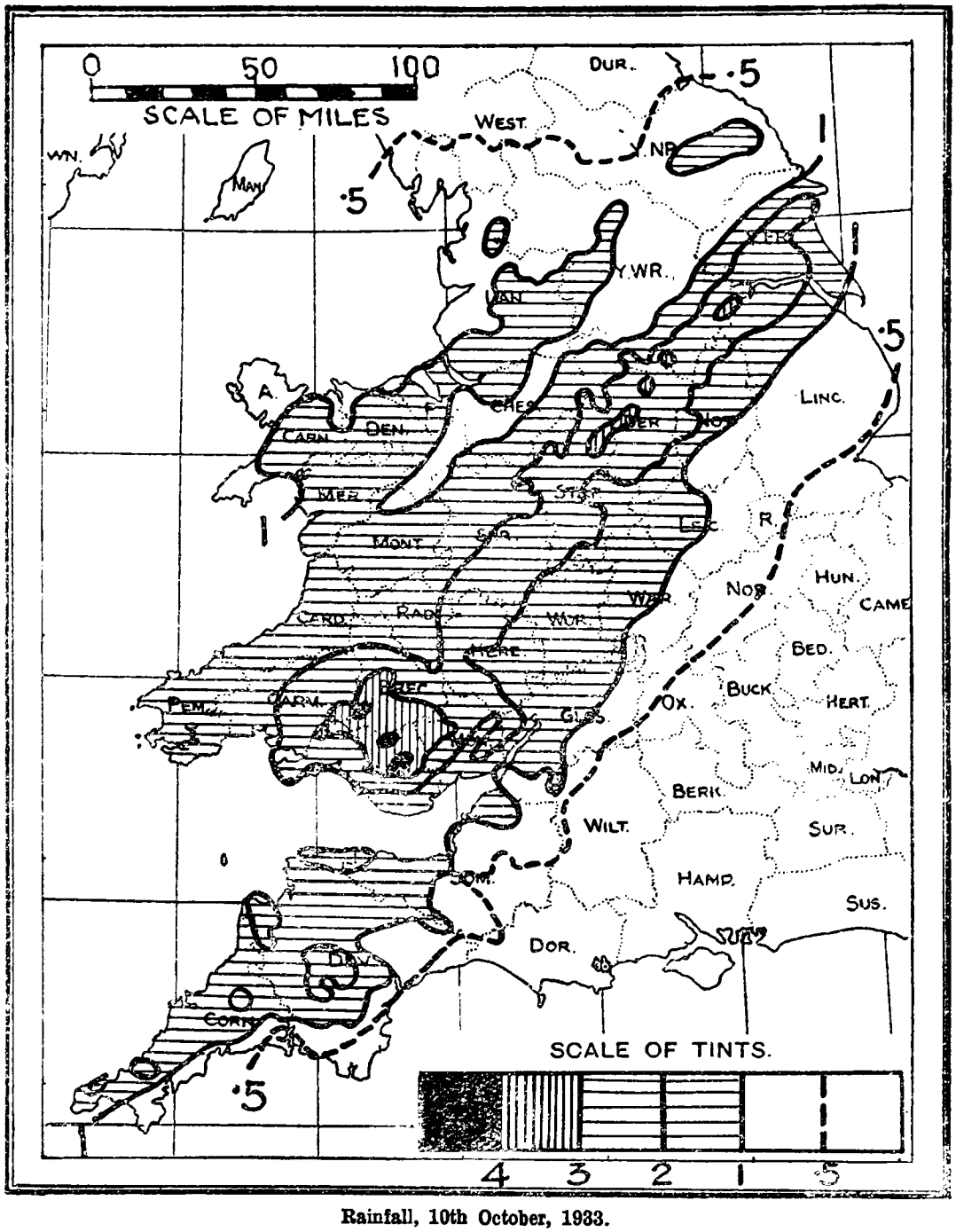
The total rainfall recorded for the 9th and 10th at Llyn Fawr Reservoir, in the mountains at the head of the Rhondda Valley, amounted to as much as 7·61 inches, at Rhondda (Lluest Wen Reservoir) 7·60 inches and at Garwnant to the South of Brecon Beacon, 7·59 inches. The duration of rainfall for these two days amounted to 32 hours at Swansea, 26 hours at Cardiff, 38 hours at Cray Reservoir, in the Black Mountains, 26 hours at Sealand Aerodrome to the west of Chester and 30 hours at the foot of Snowdon. Serious flooding occurred in certain valleys in South Wales, comparable in places with that which followed the heavy rain of November 11th, 1929.

October 13th.

Inverness.	*in.* or %	
Loch Arkaig (Achnacarry)	*2·55*	*3·9*
Inverness.	*in.* or %	
Clunes (L. Lochy W.)	*2·75*	*4·2*

October 18th.

Down.—Mourne Mounts (Fofanny Res.) ..... 3·86 *in.* or 7·1 per cent.



Rainfall, 10th October, 1933.

October 28th.

Moray.—Aberlour (Wester Elchies) .....2·15 *in.* or 7·6 per cent.

November 14th.

Ayr.	*in.* or %	*Ayr.*	*in.* or %
Largs (Stevenson Institute)	2·68 6·6	Largs (Noddsdale).....	2·56 5·5

A vigorous depression on the Atlantic, which moved south-east, caused heavy rain and strong winds. Falls qualifying for mention in this section were recorded only in Ayrshire.

December 1st.

Cornwall.—St. Keyne (Locrenton) .....2·62 *in.* or 6·2 per cent.

December, 1933, was remarkable for the small number of heavy falls of rain, which are usually associated with a steep pressure gradient from north to south, and usually most common in this month. Only one fall during the month qualifies for mention in this Section.

8. MONTHLY RAINFALL IN 1933.

Information as to the rainfall of the months of 1933 is set out in this section in various forms:—

(1) Table XIX gives generalized values of the monthly and annual rainfall over the British Isles as a whole and also over the constituent countries separately.

(2) On pages 78-79 details are given of some of the largest and smallest monthly totals of rainfall reported during 1933.

(3) In Table XX the monthly and annual totals of rainfall are set out for 400 stations, distributed evenly over the British Isles.

(4) Table XXI gives the monthly and annual falls expressed as percentages of the averages for 1881 to 1915. It is confined to 150 stations, uniformly distributed over the British Isles, for which averages are available. At the end of this table, general monthly and annual percentage values are given for the British Isles and for each of the constituent countries.

(5) A set of twelve maps showing the distribution of the actual rainfall in each month, is reproduced in this article. A thirteenth map on a larger scale depicting the distribution of rainfall for the whole year appears in Section 10. These maps were originally drawn on the much larger scale of 19 miles to the inch, and values from as many as possible of the 5,000 separate stations were plotted on each map before the isohyetal lines were drawn. Details which would tend to confuse the maps on the small scale of the reproductions have been eliminated.

(6) A second set of twelve maps showing cartographically the distribution of the percentage monthly values given in Table XXI and in the rainfall table published month by month in the *Meteorological Magazine* is also reproduced in this article. The corresponding percentage map for the whole year appears later in Section 10.

General Monthly Rainfall.

The general monthly values given in Table XIX have been computed by applying the percentage values given at the end of Table XXI to the average general values for the period 1881 to 1915. These computed values have been subsequently slightly adjusted in order that the totals for the year should agree with the totals given

in Table XXIII which are based on a more exact determination as explained in the text accompanying that table.

Table XIX.—*General Rainfall for* 1933, *computed from the average,* 1881–1915, *by applying the general percentage values given in Tables XXI and XXIII to the General Average Values.*

	England.	Wales.	England and Wales.	Isle of Man.	Scotland.	Ireland.	British Isles.
	in.	in.	in.	in.	in.	in.	in.
January	2·3	5·1	2·7	4·0	5·3	3·9	3·7
February	3·7	5·2	3·9	4·2	4·9	3·6	4·3
March..	2·9	3·5	3·0	3·4	2·4	3·5	3·1
April	1·4	1·5	1·4	2·0	3·0	1·8	1·9
May	2·1	2·3	2·2	2·6	2·2	3·1	2·4
June	2·0	3·1	2·2	2·7	2·5	2·8	2·4
July	2·1	3·0	2·2	2·1	4·2	3·0	2·9
August	1·1	1·8	1·2	1·2	3·4	2·4	2·1
September	2·5	1·9	2·4	1·0	1·7	1·4	2·1
October	3·7	7·0	4·2	5·4	5·5	3·5	4·3
November	2·0	1·8	2·1	2·3	3·4	2·0	2·4
December	1·0	2·1	1·1	2·1	1·8	2·5	1·7
Year	26·8	38·3	28·6	33·0	40·3	33·5	33·3

For the standard period 1881 to 1915, December is the wettest month of the year over the British Isles as a whole. In 1933, December was the driest month of the year with 1·7 inches over the country generally, while February and October were the wettest months each with 4·3 inches. It is shown in Table XIX that the general rainfall was between 2 and 3 inches in as many as six of the seven months from May to November. The wettest three consecutive months were January to March with a rainfall of 11·1 inches or one-third of the total for the year. The total rainfall from January to July was only ·6 inch short of the average.

December was the driest month over England. Over Wales, April was the driest month, which is more usual. In both Scotland and Ireland, September was the driest month, although on the average June is the driest month in Scotland and April and May the driest months in Ireland.

At the end of Table XXI the general values are given as percentages of the average. The rainfall exceeded the average over the British Isles as a whole only in February and October. The percentage deficiencies were most marked in December, August and November.

August, 1933, with 2·1 inches, gave the least rainfall in August since 1870, apart from the Augusts of 1880, 1899 and 1913 with

1·5, 1·9 and 1·7 inches respectively. November was the driest November since that of 1922. The total rainfall November to December, 1933, was 4·1 inches and less than that of any similar period back to 1870, the next driest November to December being that of 1879 with 4·2 inches. The total rainfall during the nine months April to December, 1933, of 22·2 inches was also less than that of any similar period back to 1870, the next driest April to December being those of 1921 and 1887 both with 24·1 inches.

Over England and Wales, August, 1933 was the driest August since 1870 but December, 1926 was rather drier than December, 1933. Over Scotland, August, 1933 was not quite as dry as the August of the previous year but September, 1933 was the driest September since that of 1910, when a similar amount was recorded, and December, 1933, was the driest December since before 1870. Over Ireland, August, 1933, was drier than any August since that of 1913, September since that of 1929, November since that of 1922 and December since that of 1926.

Numerous stations recorded less rainfall in December, 1933, than in any December since before 1870. Amongst these the following may be mentioned :—

	Dec. 1933 in.	Previous smallest amount. in.	Year.
St. Pancras (Camden Square), London ..	·36	·43	1926
Tenterden (Ashenden), Kent	·57	·58	1931
Oxford (Radcliffe Obsy), Oxford	·30	·30	1926
Wellingborough (Swanspool), Northants...	·33	·47	1926
Church Stretton (Wolstaston), Shropshire	·67	·70	1926
Dumfries (Cargen), Dumfries	·56	·56	1890
Blair Atholl (Blair Castle Gdns.), Perth ..	·73	·76	1880
Alness (Ardross Castle), Ross and Cromarty	·41	·58	1888

At Hull (Pearson Park) and Dublin (Fitz William Square), August, 1933, was the driest August on record while at Alness (Ardross Castle) September, 1933, was the driest September on record and at Stornoway and Gorey (Courtown House) in Co. Wexford, November, 1933, was the driest November on record.

Extremes of Monthly Rainfall at Individual Stations.

(*a*) *Monthly Totals.*—More than 18 inches was recorded in January in Snowdonia and in the English Lake District. The largest actual

measurements were 19·20 inches at Snowdon (L. Llydaw Copper M.) and 18·75 inches at Sprinkling Tarn above Borrowdale.

On the other hand the smallest totals were recorded in December in Lincolnshire, Nottinghamshire and Derbyshire. The smallest actual measurements were :—

Station.	County.	Amount. in.
Spalding (Spalding Marsh) ..	Lincolnshire ..	·10
Sutton in Ashfield (Rushley P.S.)	Nottinghamshire ..	·12
Nottingham (Trent Lane) ..	Nottinghamshire ..	·19
Etwall (Sewage Farm)	Derbyshire ..	·20

(*b*) *Monthly percentage totals.*—Monthly totals of more than three times the average were recorded in February at Felixkirk (Mt. St. John) and at Wetherby (Ribston Hall). At Felixkirk, the total was 5·66 inches and there was precipitation on 20 days, the most striking period being one of 11 consecutive days from the 17th to 27th during which 4·87 inches of rain and snow was recorded. At Wetherby the large total of 5·24 inches for the month was also largely due to heavy snow, the total for the period 23rd to 26th being 3·66 inches. Other large percentage values were 295 at Ushaw (College) and 272 at York (Museum Gardens), both for February, and in these cases the large totals were again due to the heavy snowfalls of the 23rd to 26th.

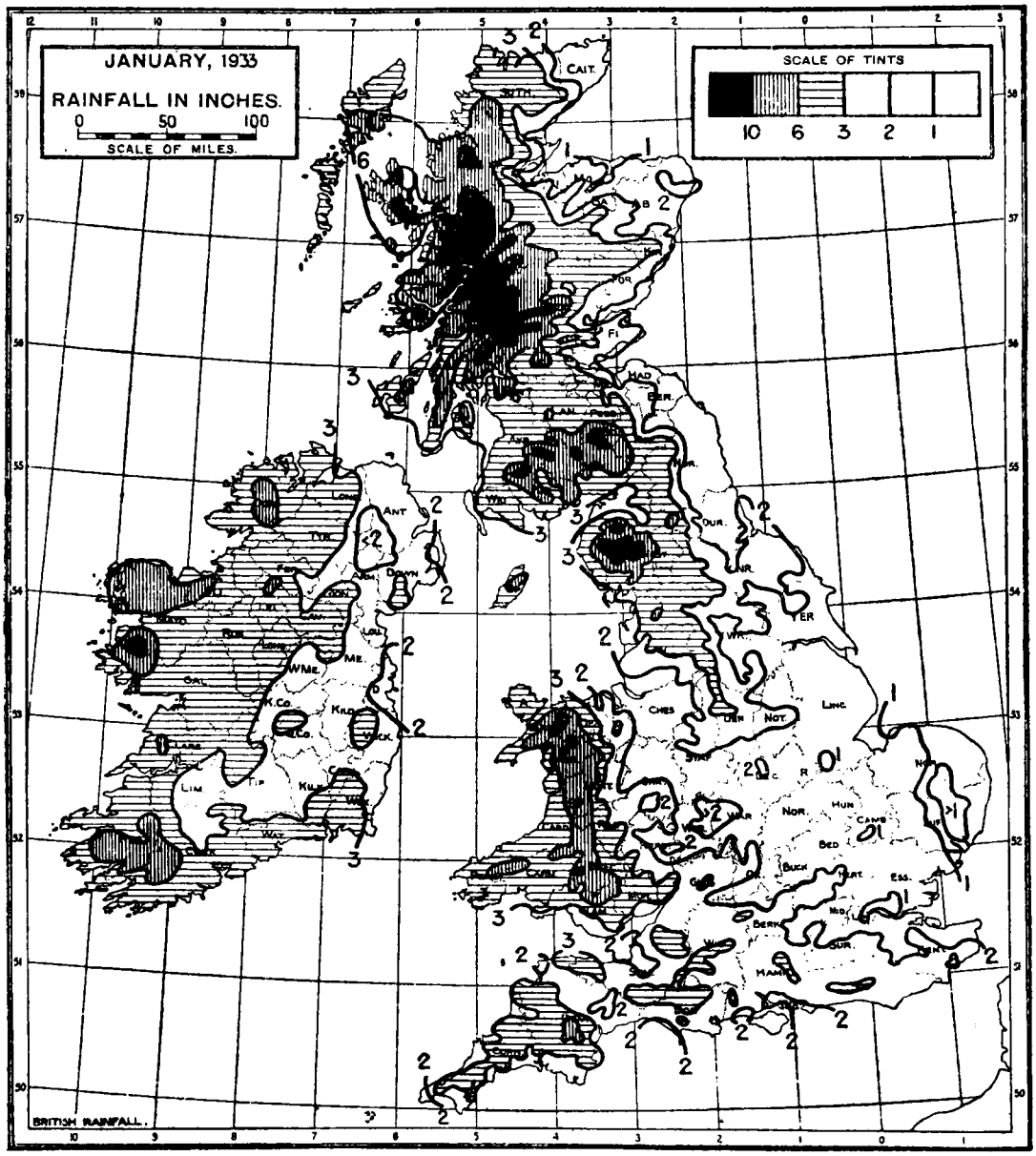
The smallest percentage values occurred in September and December. At Lairg in Sutherlandshire and at Armagh Observatory in Co. Armagh the values for September were 5 and 6 respectively, the totals for the month were ·14 and ·15 inch respectively and measurable rain occurred on 6 days only in each case. In December the smallest percentage values were 8 at Alvie Manse in Inverness-shire and 10 at Grantown-on-Spey in Morayshire, Alness (Ardross Castle) in Ross and Cromarty and at Oxford (Magdalen College). At Oxford the total rainfall for December was ·24 inch and the total for the period November 26th to December 24th was only ·02 inch.

The Rainfall and Weather of the Individual Months.

*** Maps showing the distribution of mean pressure and the movements of the centres of depressions for each month are published in the *Monthly Weather Report.*

In the following pages maps are given showing the distribution of the actual rainfall in each month, and of the percentage monthly values, together with a short description of the weather of each month. Further details are given in the *Monthly Weather Report* and in the *Meteorological Magazine.*

January.—The mean pressure for the month was everywhere above the average, due mainly to the anticyclonic distribution which prevailed from the 20th to 29th, when cold but dry weather prevailed. The first ten days of the month were mild, heavy rain associated with gales occurring in the north-west of England and Wales and over Scotland generally. The total recorded during these ten days at



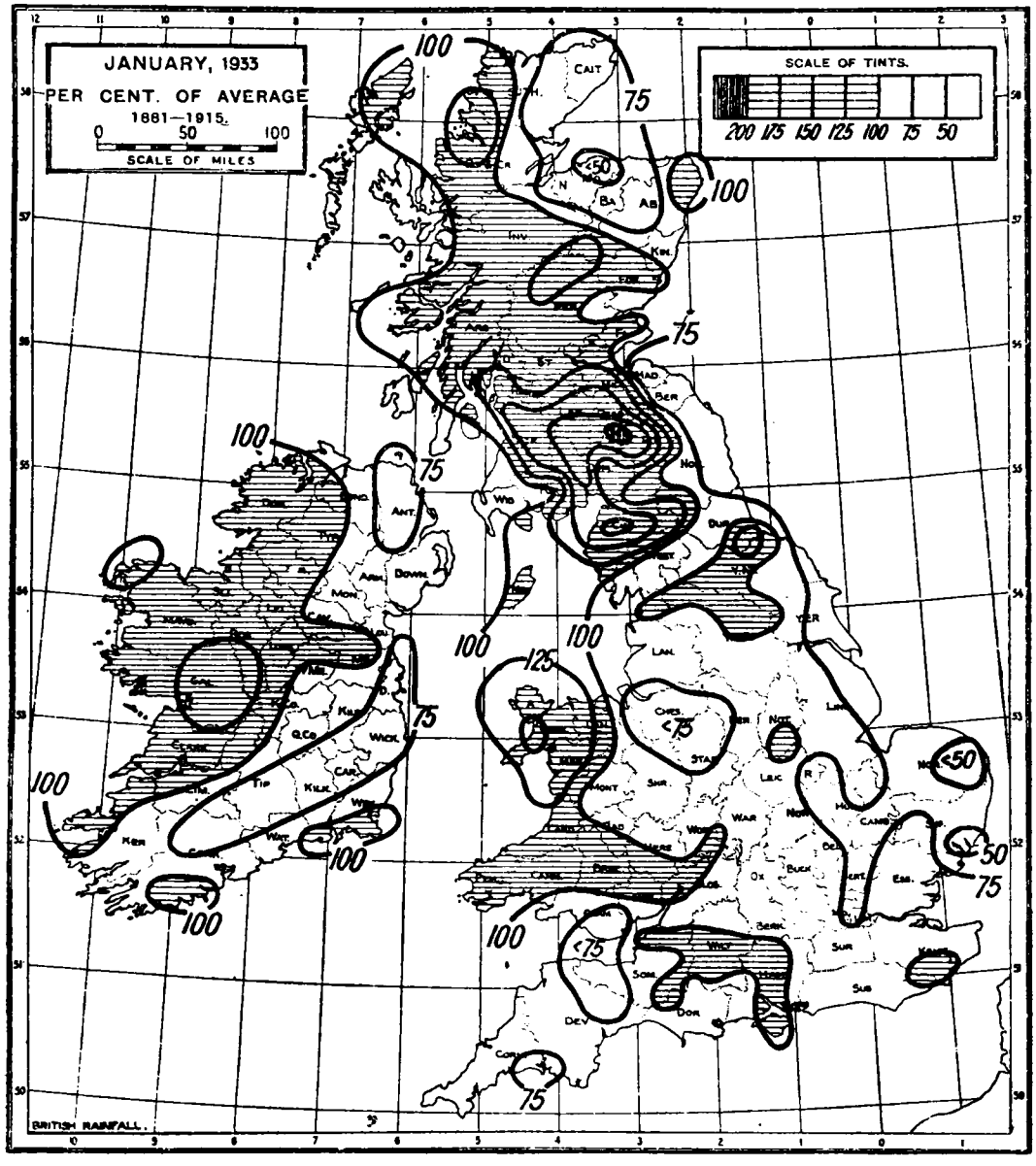
Rainfall, January, 1933.

Borrowdale was 7·6 inches and at Fort William 6·4 inches. Many stations in the English Lake District and in Snowdonia recorded more than 3 inches for the 2nd. Heavy rain, associated with gales, also occurred on the 21st, when more than 3 inches fell on Snowdon, the English Lake District and the western Highlands.

An unusual feature of the weather of this month was the excess

of sunshine in many parts of the British Isles. At Holyhead and Ross-on-Wye more than twice the average was recorded and over the British Isles generally the mean excess was 13 hours.

Less than 1 inch was recorded over the east of Norfolk and Suffolk compared with nearly 20 inches in Snowdonia and the English Lake District. The percentage map shows that over most of England,

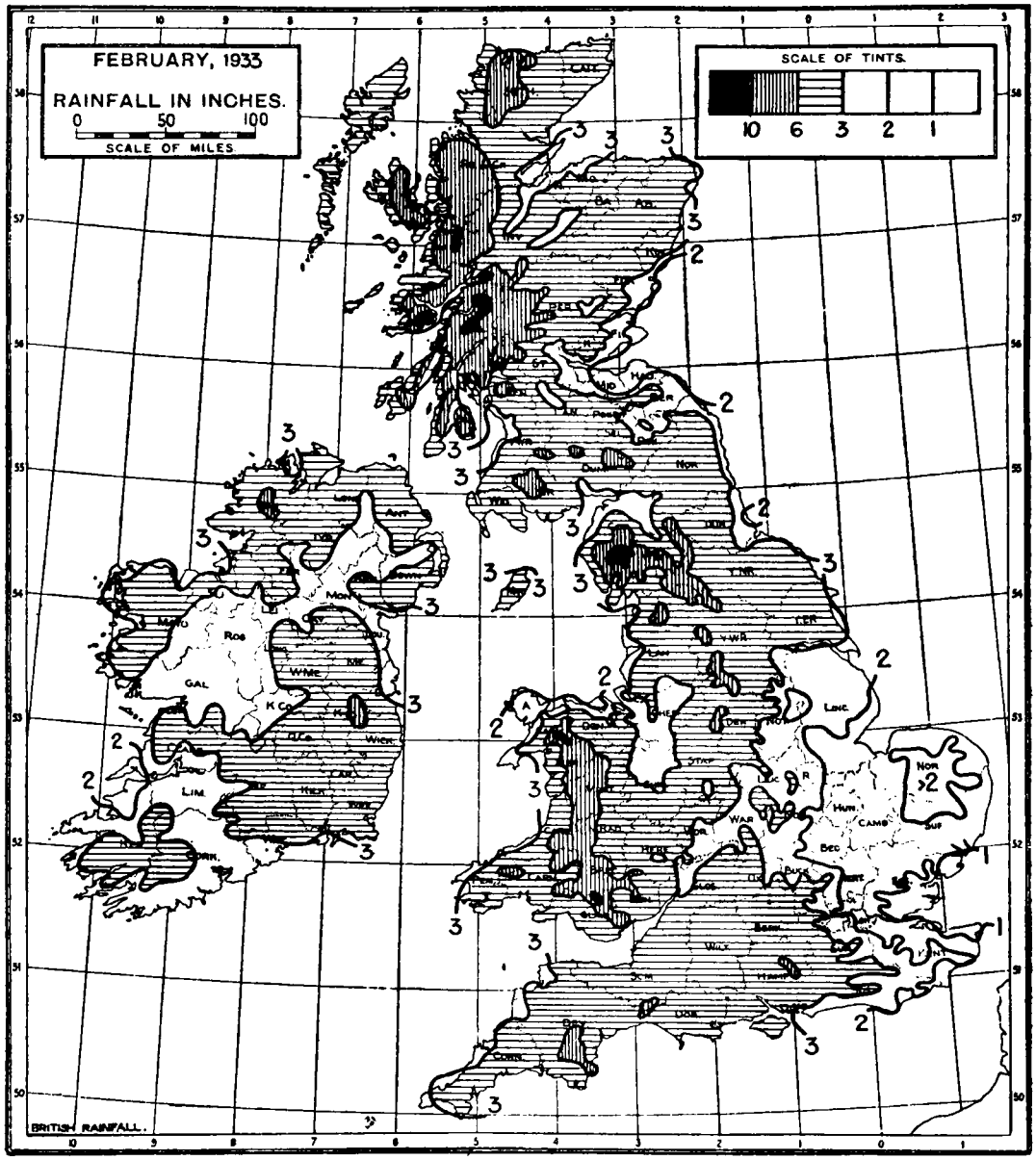


Rainfall, January, 1933, as per cent. of average.

the east and north-east of Scotland, and the eastern half of Ireland, the rainfall was less than the average. Rather less than half the average was recorded in parts of Norfolk, Suffolk and Morayshire. More than 150 per cent. occurred over parts of Carnarvonshire, Cumberland and the southern Uplands, more than 200 per cent. being recorded over parts of Selkirkshire and Dumfriesshire.

February.—The mild weather which set in at the end of January persisted during the first part of the month. A period of cold weather then ensued and heavy snowstorms were experienced from the 23rd to 26th. The mean pressure for the month was mainly above the average in the west and north and a little below in the south-east and east.

The outstanding feature was the snowstorms of the 23rd to 26th,

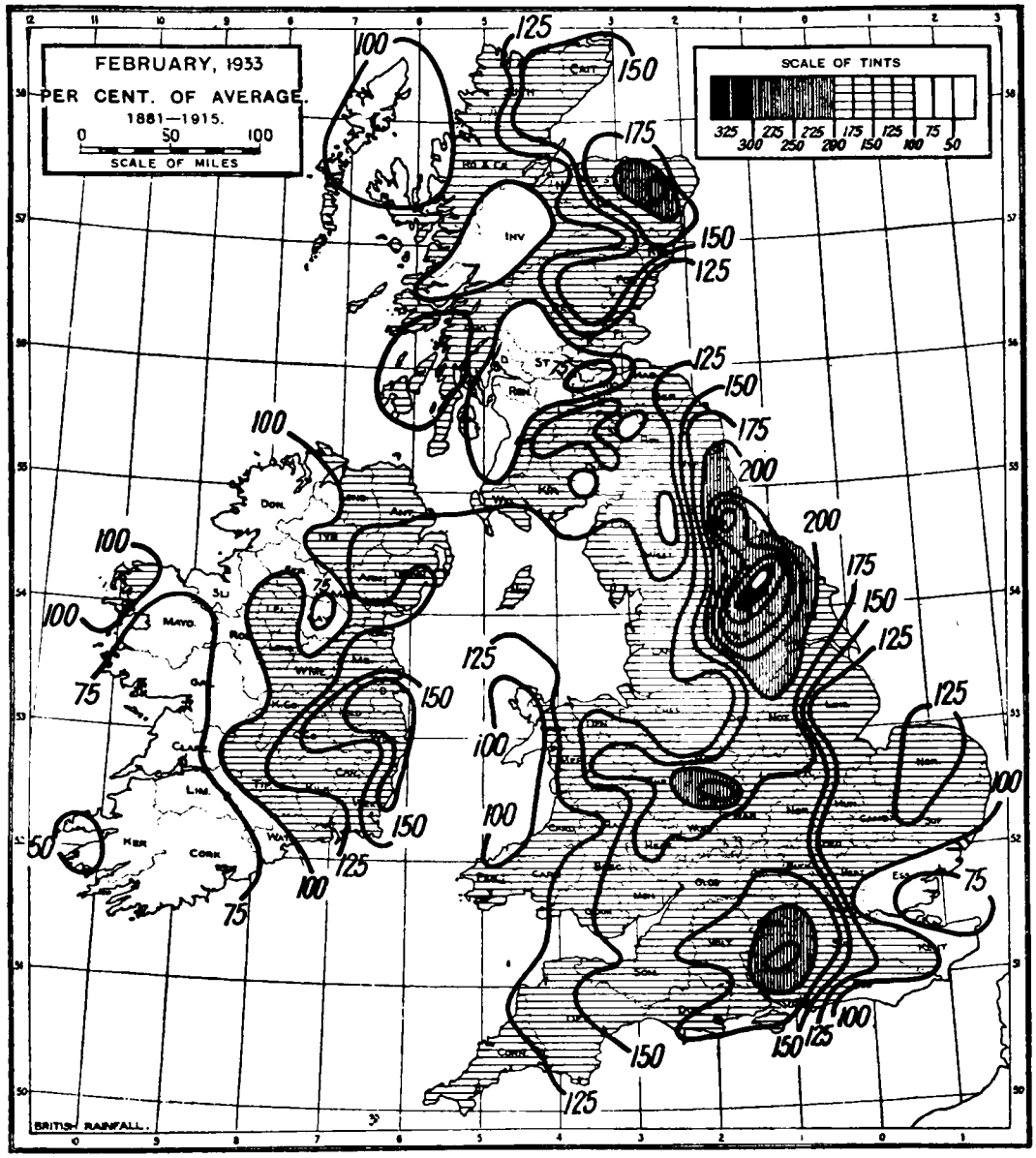


Rainfall, February, 1933.

mentioned above, which began in Ireland and Wales on the 23rd and spread east during the 24th and then north beyond the Scottish border. At Hacketstown Rectory, Co. Carlow a "record snowstorm with drifts 6 to 8 or 10 ft. deep," was experienced (see frontispiece). On the 25th and 26th rain and sleet fell in the south but elsewhere there was further snow (see Section 7).

The rainfall in inches varied from less than one inch in the neighbourhood of the Thames Estuary to more than ten inches in Snowdonia, in south Wales, the English Lake District and the western Highlands of Scotland.

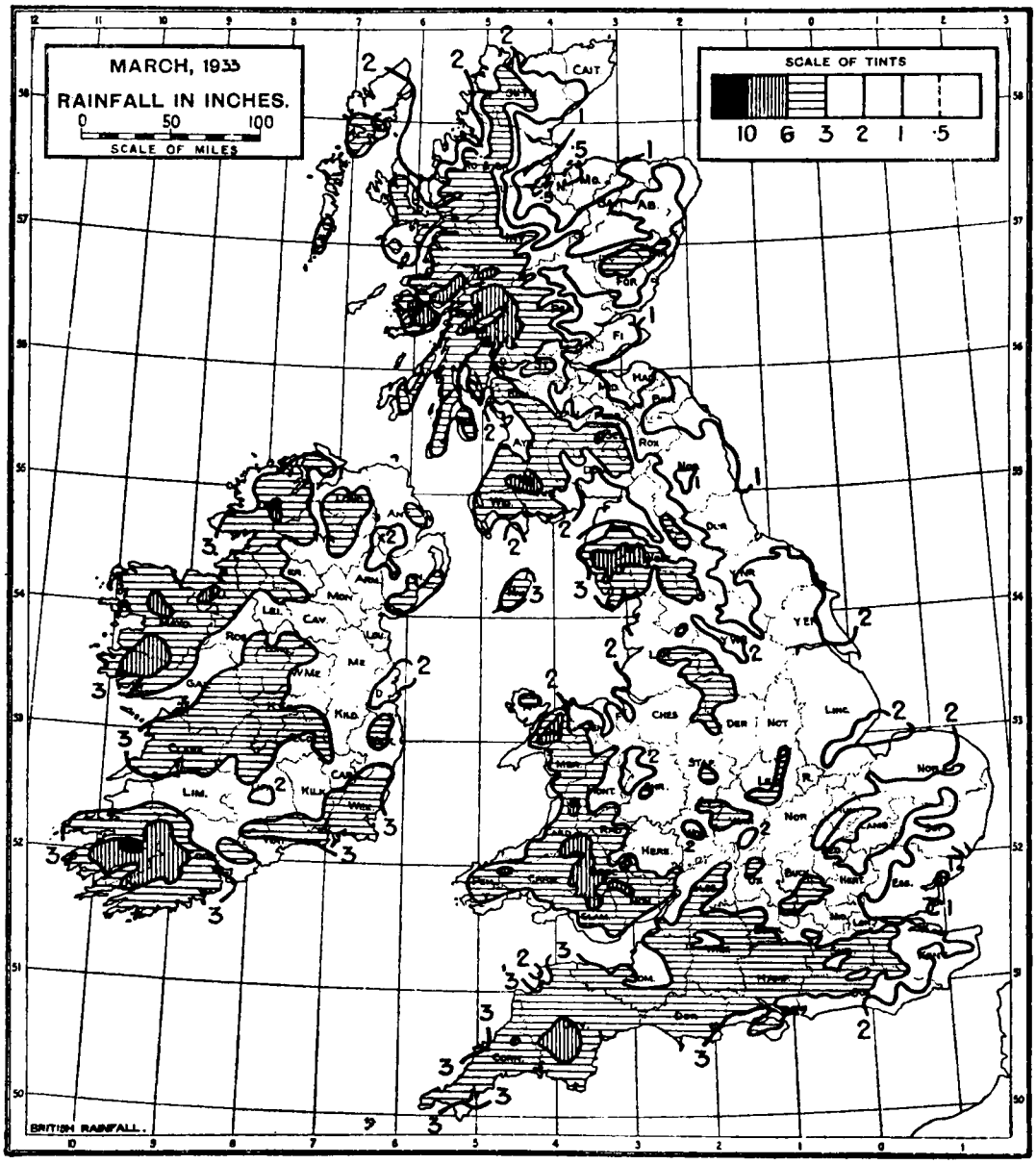
The percentage map shows that practically the whole of England recorded more than the average, though in the neighbourhood of the



Rainfall, February, 1933, as per cent. of average.

Thames Estuary there was less than 75 per cent. More than twice the average was recorded in Hampshire, near Birmingham, over a large area stretching from Retford to Morpeth and in parts of Aberdeenshire, while more than three times the average occurred over the north Yorkshire Moors. In the south-west of Ireland, less than half the average was recorded.

March.—The month was exceptionally warm and sunny. During the periods 8th to 15th and 21st to 29th high day temperatures were recorded. Over the British Isles generally the month was probably the mildest March since that of 1893. Practically the whole of the British Isles, with the exception of the north-west of Scotland, had

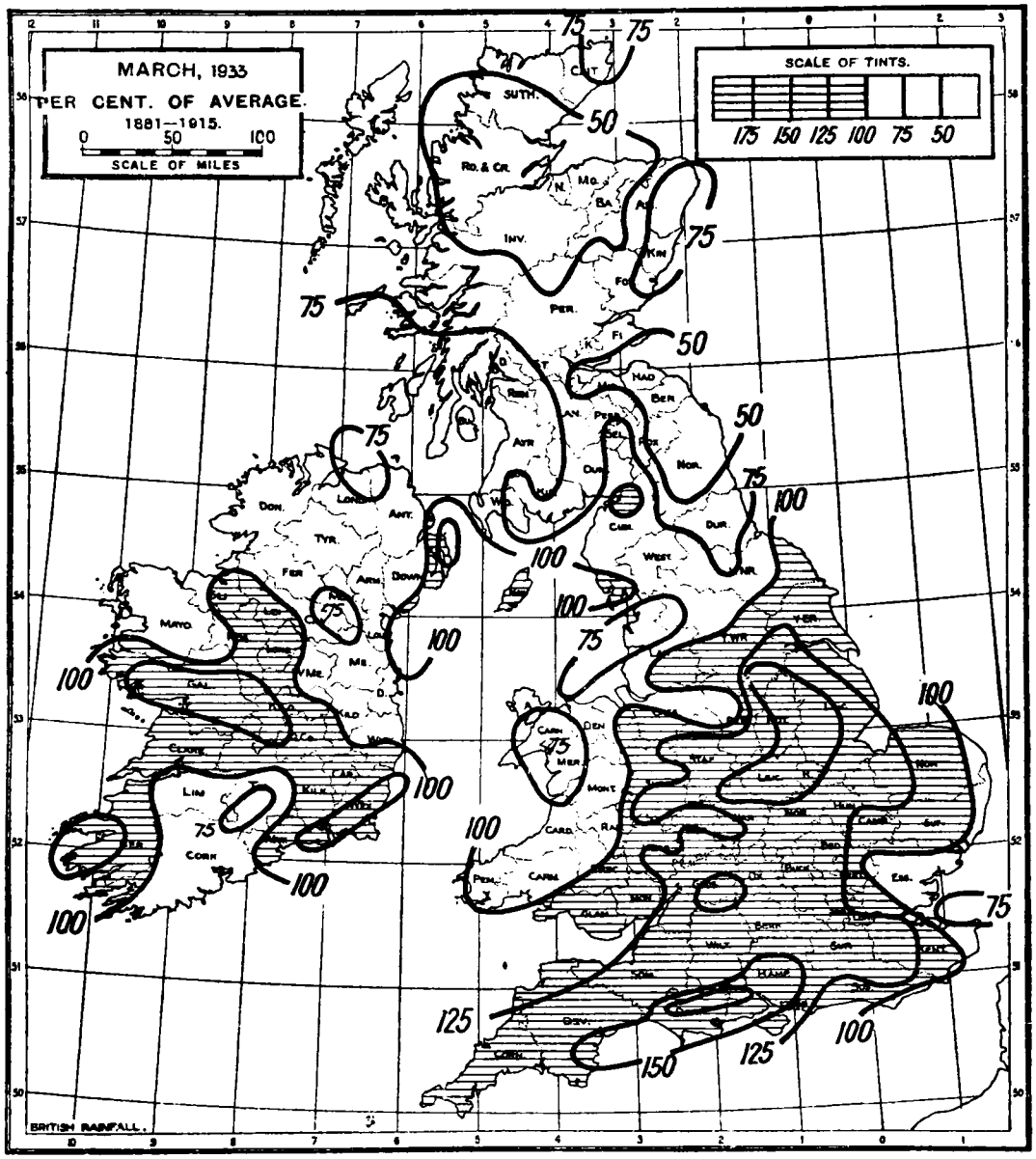


Rainfall, March, 1933.

more than the average sunshine, the mean excess over the British Isles being as much as 30 hours.

The rainfall in actual inches varied from less than ·5 inch in the neighbourhood of the Moray Firth to more than ten inches in Snowdonia and the mountains of Killarney. Large areas in the north of Scotland, the south-east of Scotland and north-east of England

recorded less than 50 per cent. of the average. At both Foyers on Loch Ness and Bellingham in Northumberland, the largest amount on any day was ·15 inch. More than 150 per cent. was recorded along the south coast from Torquay to Southampton, near Cirencester and over a large area in the Midlands. At Fordingbridge, in

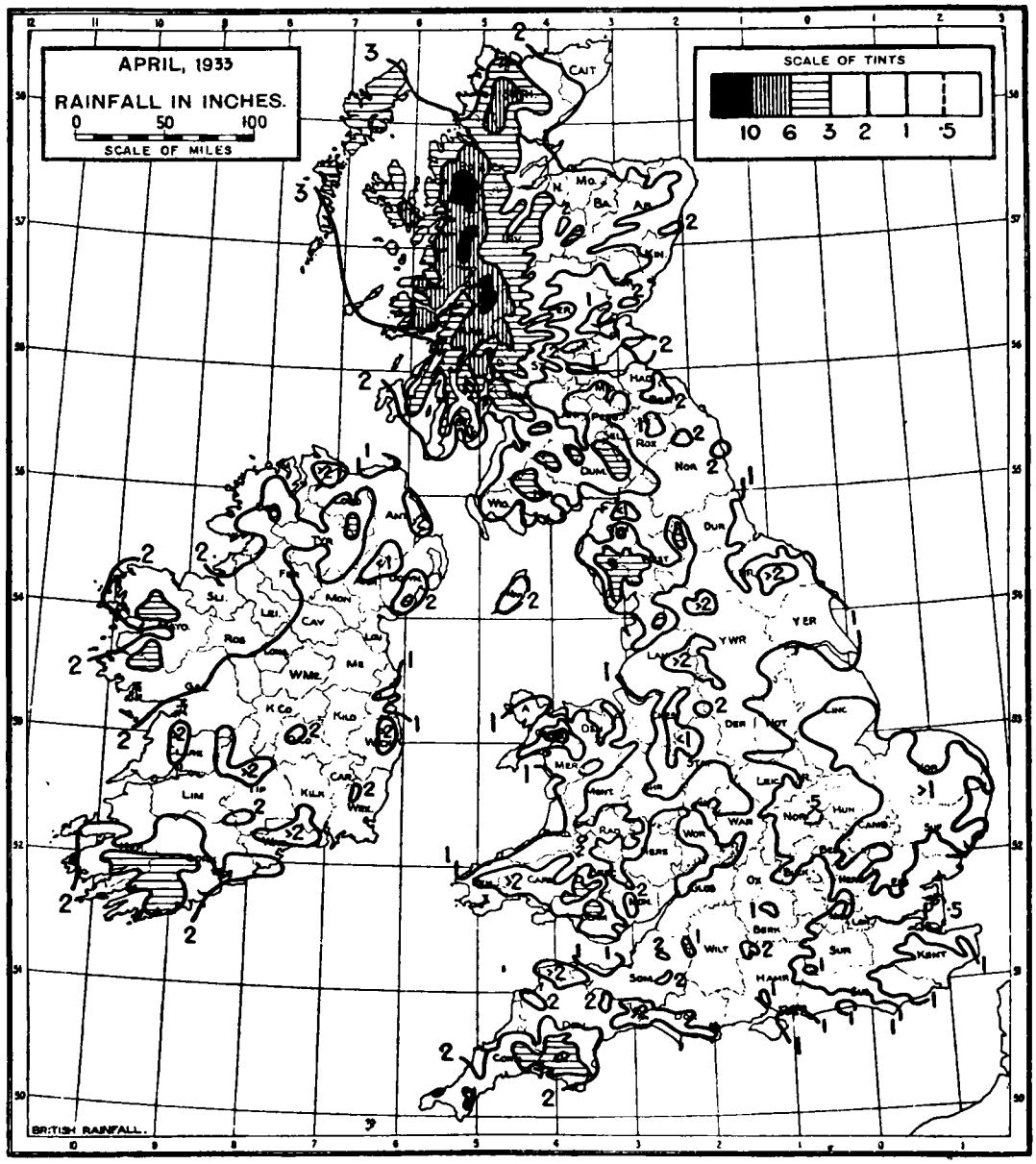


Rainfall, March, 1933, as per cent. of average.

Hampshire, the total of 4·17 inches or 179 per cent. was due mainly to the heavy rains of the 2nd to 5th and 15th to 18th, when as much as 1·72 inches and 2·00 inches respectively was recorded. Over Ireland the range was smaller; from rather less than 75 per cent. in parts of Co Tipperary, Cavan and Londonderry to 140 per cent. in Co. Kerry and Galway.

April.—The first half of the month was mainly fair and warm. From the 17th to 22nd a cold spell set in ; subsequently unsettled conditions prevailed. The mean pressure was everywhere above the average, the excess ranging from 2·1 mb. at Stornoway to 6·5 mb. at Portland Bill.

The map of the rainfall in actual inches shows unusually large



Rainfall, April, 1933.

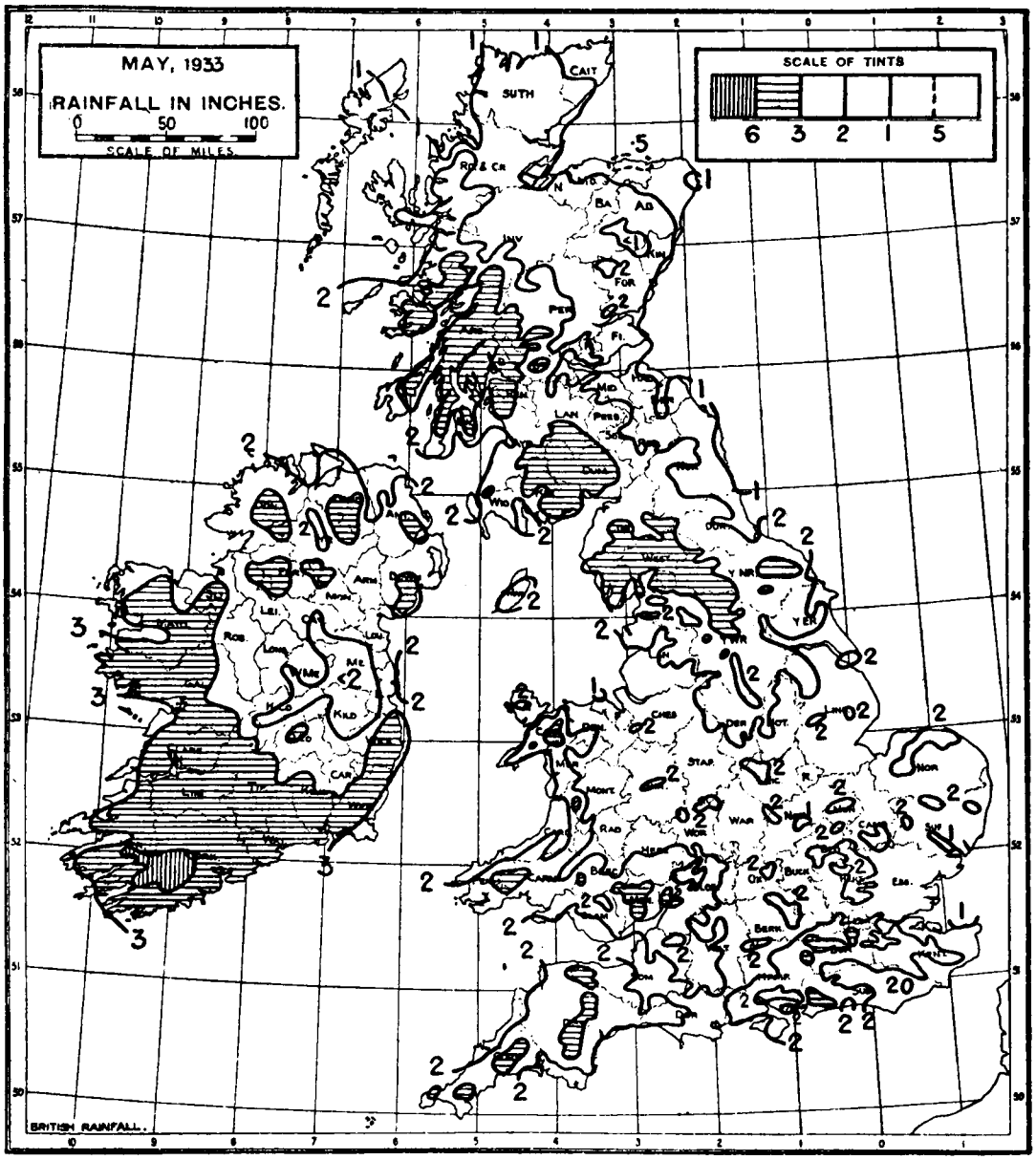
areas with less than 2 inches, *viz.*, over most of England, Wales, central Ireland and southern Scotland. Less than 1 inch was recorded over large areas in the south-east of England, near Watchet, and along the Welsh Coast from Fishguard to Barmouth. At the mouth of the Thames totals only reached ·5 inch. Over England, Wales

and Ireland falls of more than 6 inches were confined to small areas in Dartmoor and the English Lake District, but in Scotland this amount fell over most of the Western Highlands. More than ten inches was recorded near Ben Nevis and at the head of the River Garry. Less than half the average was recorded over most of Wales, over large areas in the Midlands, Lincolnshire, Kent and Devon, as well as over

Rainfall, April, 1933, as per cent. of average.

central Ireland and in Co. Armagh. The total rainfall exceeded the average at only a few stations in England, but over a large part of western Scotland, as well as near Edinburgh and Aberdeen. At Falconhurst in Kent little rain occurred during the month apart from the 23rd to 25th when only ·57 inch was recorded. At Achnashellach, in Ross-shire, on the other hand, there were 22 wet days.

May was the fourth consecutive month in which the mean temperature over the British Isles was in excess of the average, although the mean excess was less than in either March or April. The weather was generally dull, the aggregates of sunshine being about three-quarters of the average in most districts. Rain was reported daily from the 1st to 10th, some of which was of the thunderstorm type.

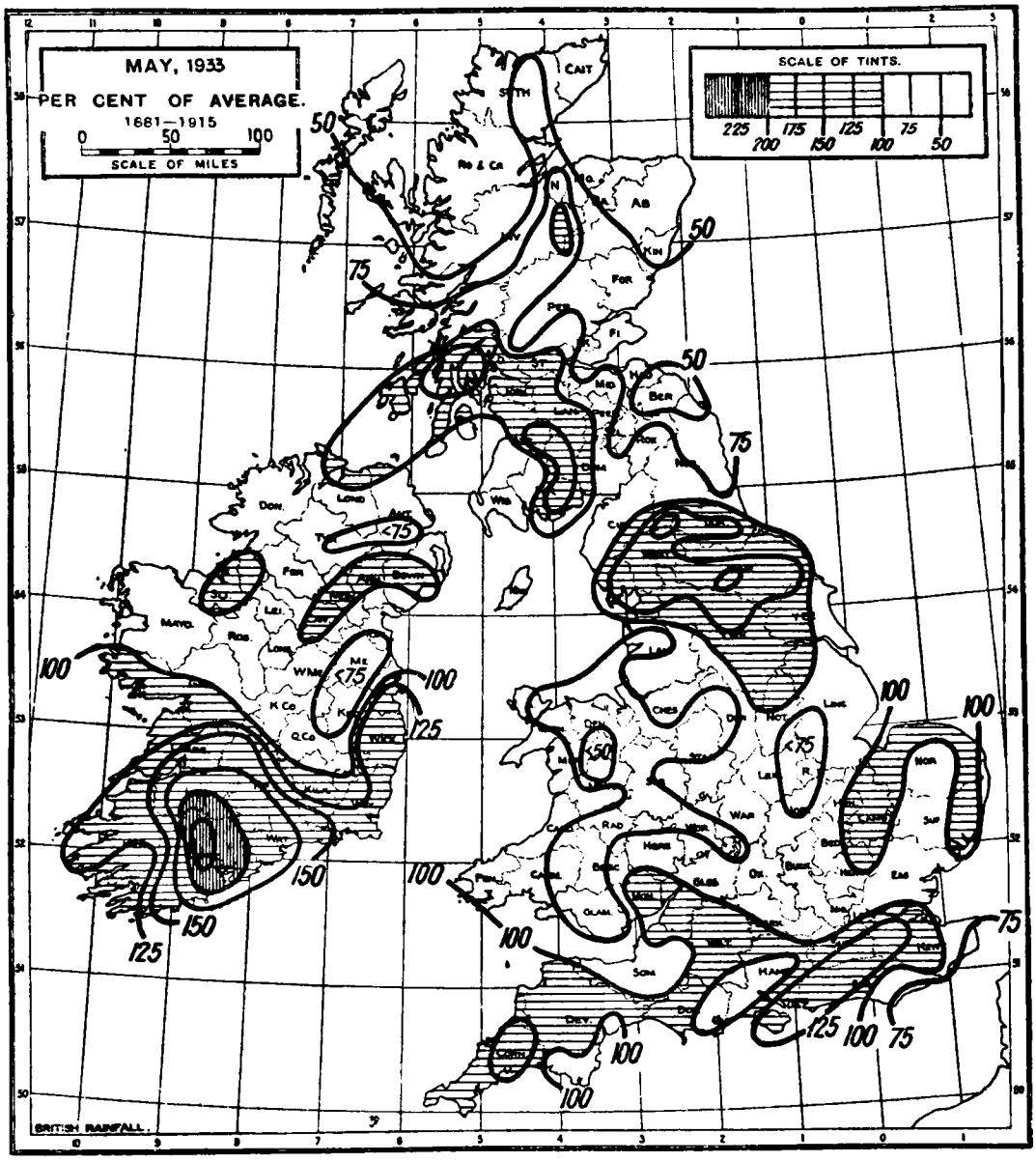


Rainfall, May, 1933.

Thunderstorms were also frequently reported from the 22nd to 29th.

The total rainfall was less than 1 inch over a narrow strip along the extreme north-west and east coasts of Scotland, while near Banff only ·3 inch was recorded. On the other hand more than 6 inches fell over the mountains of Co. Kerry and Co. Clare.

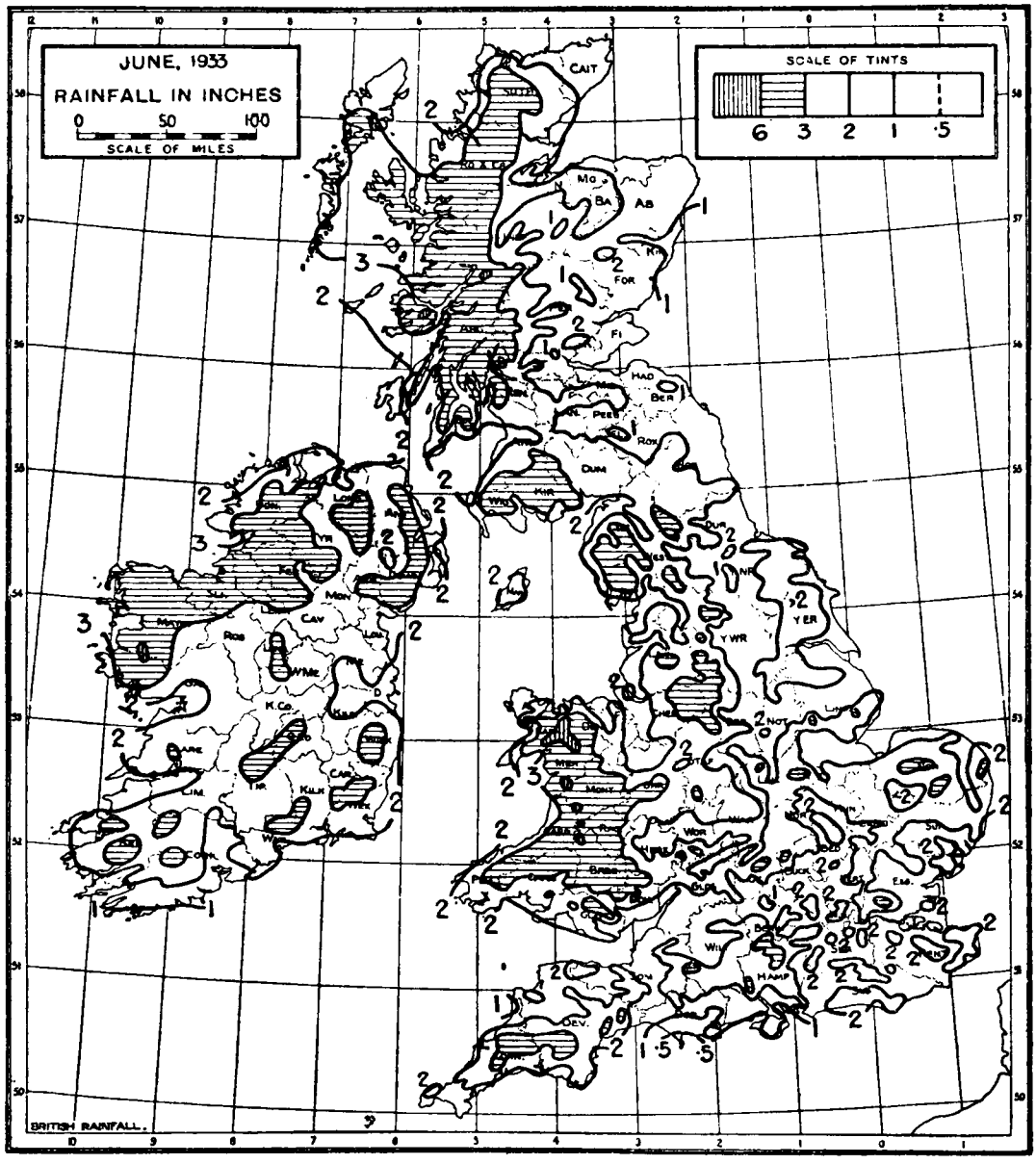
Less than half the average was recorded over large areas in the north of Scotland, in Berwickshire, and in the north-east of Wales. Falls exceeding the average were widespread in southern Scotland, northern England and in the south of England and of Ireland. The large falls to the south of London were due in part to the thunder-



Rainfall, May, 1933, as per cent. of average.

storm on the 23rd, when nearly 3 inches was recorded at Wisley and at Banstead. More than twice the average was recorded over parts of southern Ireland, due mainly to the heavy rains of the 2nd to 6th and 19th, which gave amounts of 2·52 inches and ·84 inches respectively at Mallow, Co. Cork.

June was mainly sunny and warm with frequent thunderstorms in Great Britain, but duller weather on the whole prevailed in Ireland. The mean excess of sunshine during the month over the British Isles as a whole was about 21 hours, and the mean temperature was about 2·3° F. in excess of the average. More intense falls occurred in June

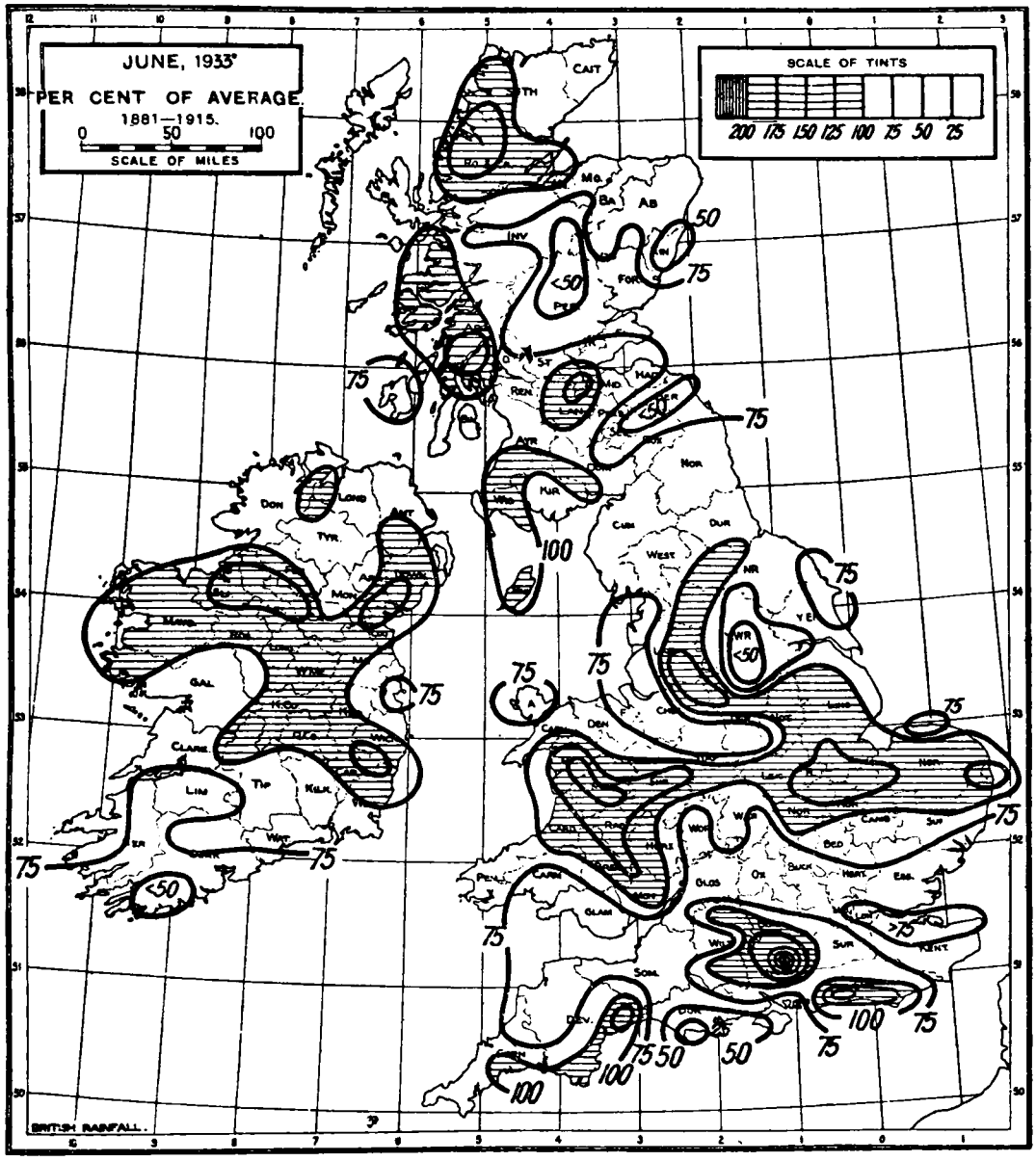


Rainfall, June, 1933.

than during any other month of the year, the bulk of the remaining falls occurring in July (see Section 6).

The distribution on the percentage map is more irregular than usual. At Oxford the percentage was 57 compared with 217 at Ovington Rectory in Hampshire, the difference being due mainly to

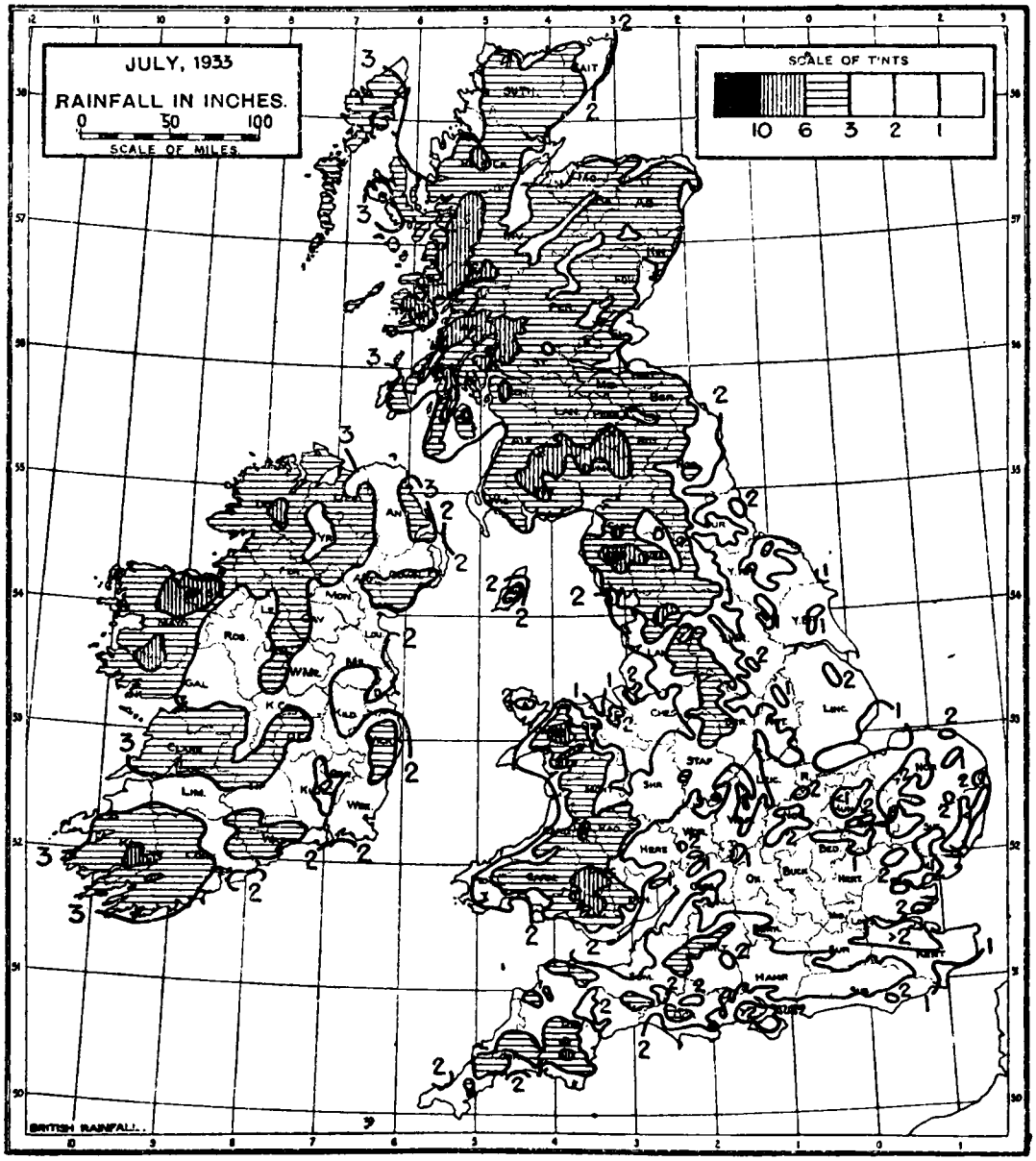
heavy falls of 2·37 and 1·04 inches at Ovington Rectory on the 15th and 26th June respectively, no rain being recorded at Oxford on these days. At Wakefield (Clarence Park) the percentage was 46 compared with 140 at Manchester (Whitworth Park) where falls of ·86 and ·98 inches occurred on the 8th and 18th June respectively. At Glen-



Rainfall, June, 1933, as per cent. of average.

leven (Corrour) the percentage was 98 compared with 37 at Blair Atholl where the total rainfall for the month was only ·73 inch. Less than 50 per cent. was recorded over widely separated areas, *viz.*, the south of Dorsetshire, near Wakefield in Yorkshire, in part of the Grampians and in the south of Co. Cork.

July was unusually warm and sunny. The mean temperature over the British Isles generally was comparable with that of July, 1921, and the Julys of 1933 and 1921 rank as the warmest Julys since before 1881. The temperature in most places was comparable with that usually recorded in July some 200 miles further south. The total sunshine over the country generally was about 17 hours in



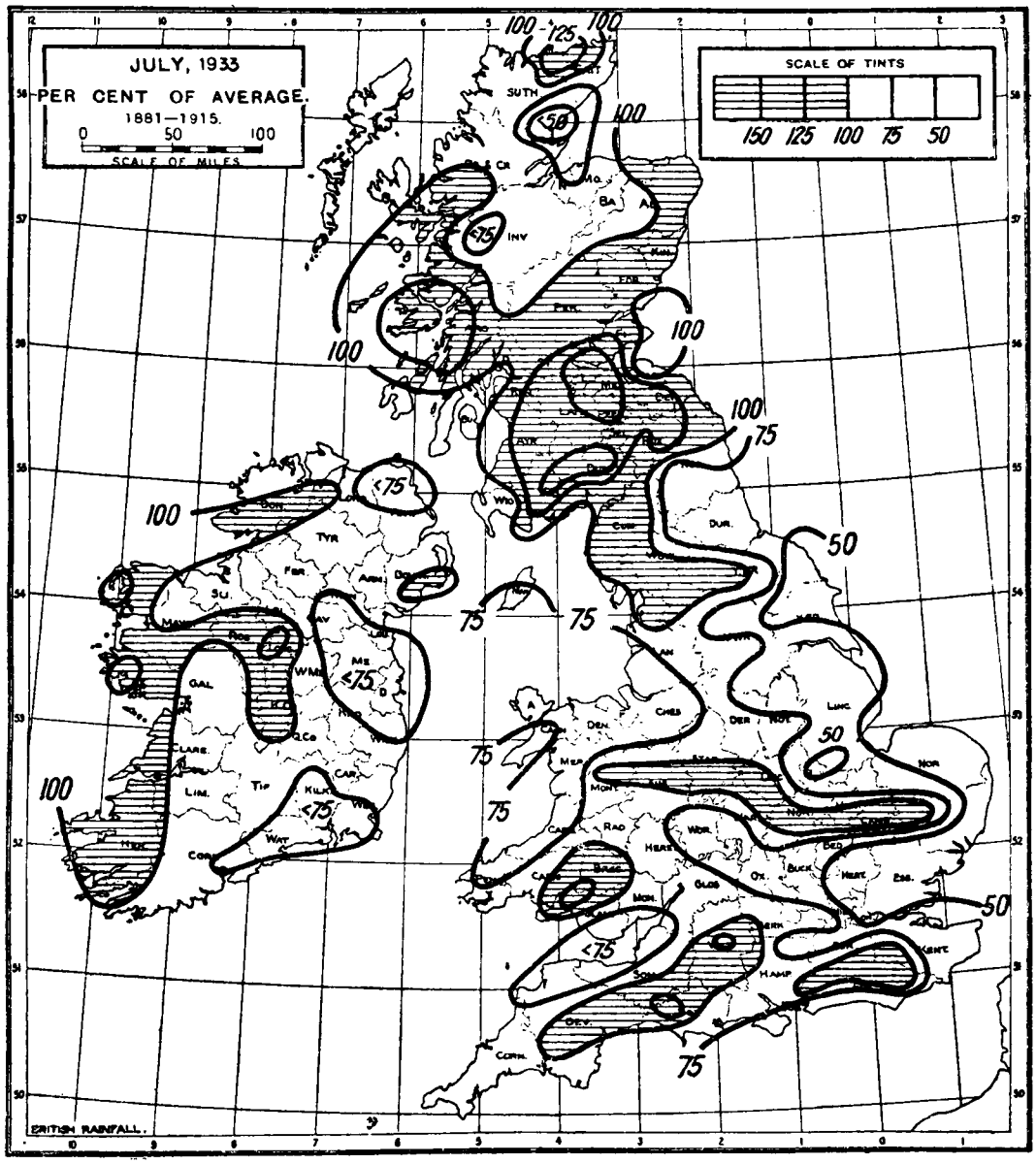
Rainfall, July, 1933.

excess of the average. At Southampton as many as 17 days gave more than 9 hours' duration of bright sunshine, while most stations in England, Wales and Ireland only recorded one sunless day.

The total rainfall varied from less than 1 inch over a number of small areas near the Wash, Huntingdon, Bedford and Tewkesbury to over 10 in. on Snowdon, the English Lake District, on Ben More

in Mull and in Co. Mayo. On Snowdon and in Borrowdale as much as 7·2 and 6·3 inches respectively fell from the 7th to 13th and 4·3 and 2·9 inches from the 27th to 30th.

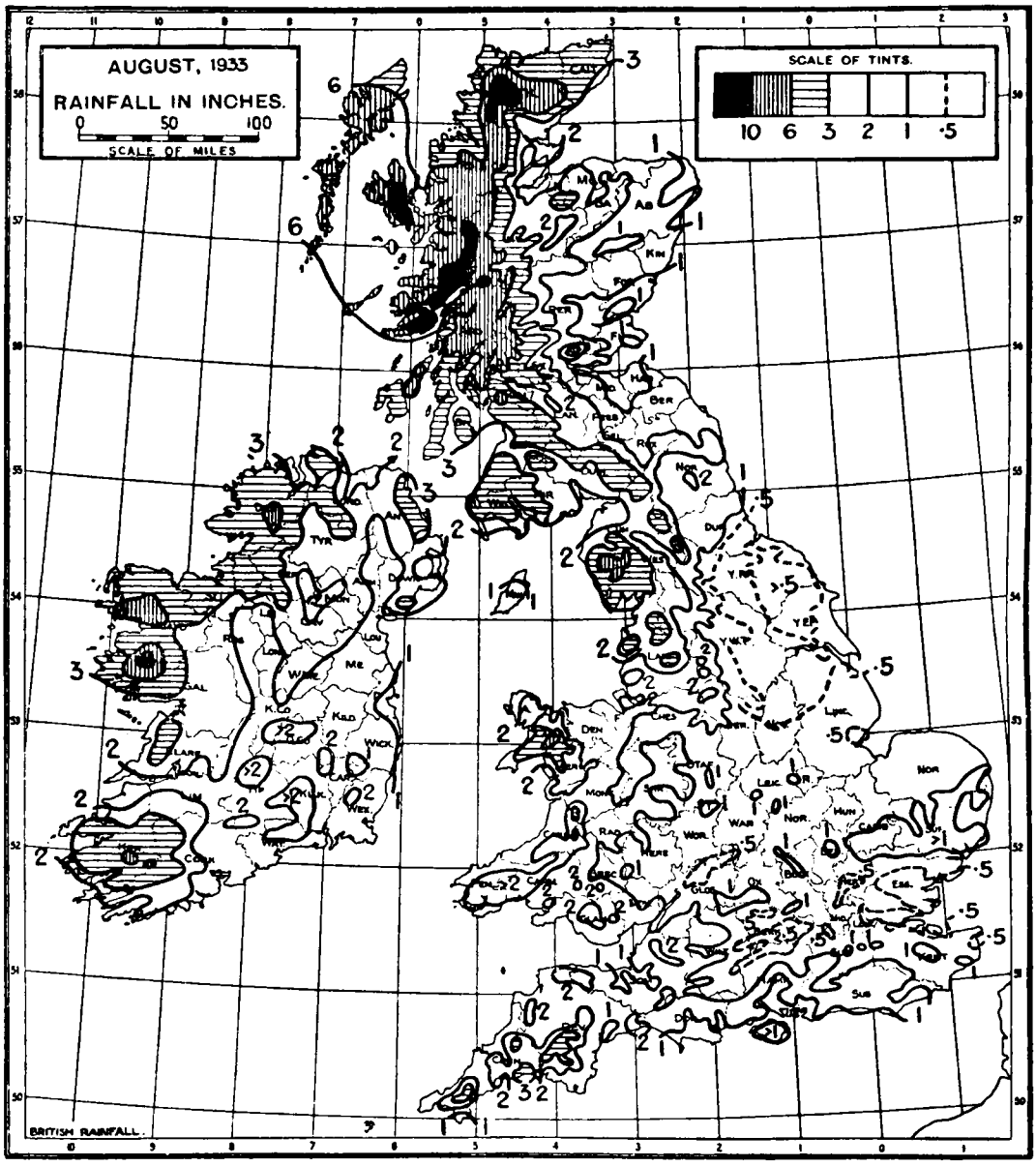
The percentage map shows that less than half the usual rainfall was experienced along the east coast from Scarborough to the Thames Estuary, over part of the south of Lincolnshire and of Sutherland-



Rainfall, July, 1933, as per cent. of average.

shire, while more than 150 per cent. fell near Edinburgh and over the Southern Uplands. At Royston, in Hertfordshire, and Rendlesham Hall, in Suffolk, the percentages were 27 and 32 and the actual rainfall ·68 and ·74 inch respectively. At Edinburgh and Stobo Castle, to the west of Peebles, the rainfall was as much as 4·78 and 4·94 inches respectively and in each case 170 per cent. of the average.

August, like July, was unusually warm and sunny. The mean excess of sunshine over the British Isles generally was as much as 35 hours. At Kew Observatory there were as many as 16 days with more than 9 hours' duration of bright sunshine. The mean temperature over the country generally was however lower than that of August, 1911, which gave the highest shade temperature reading at



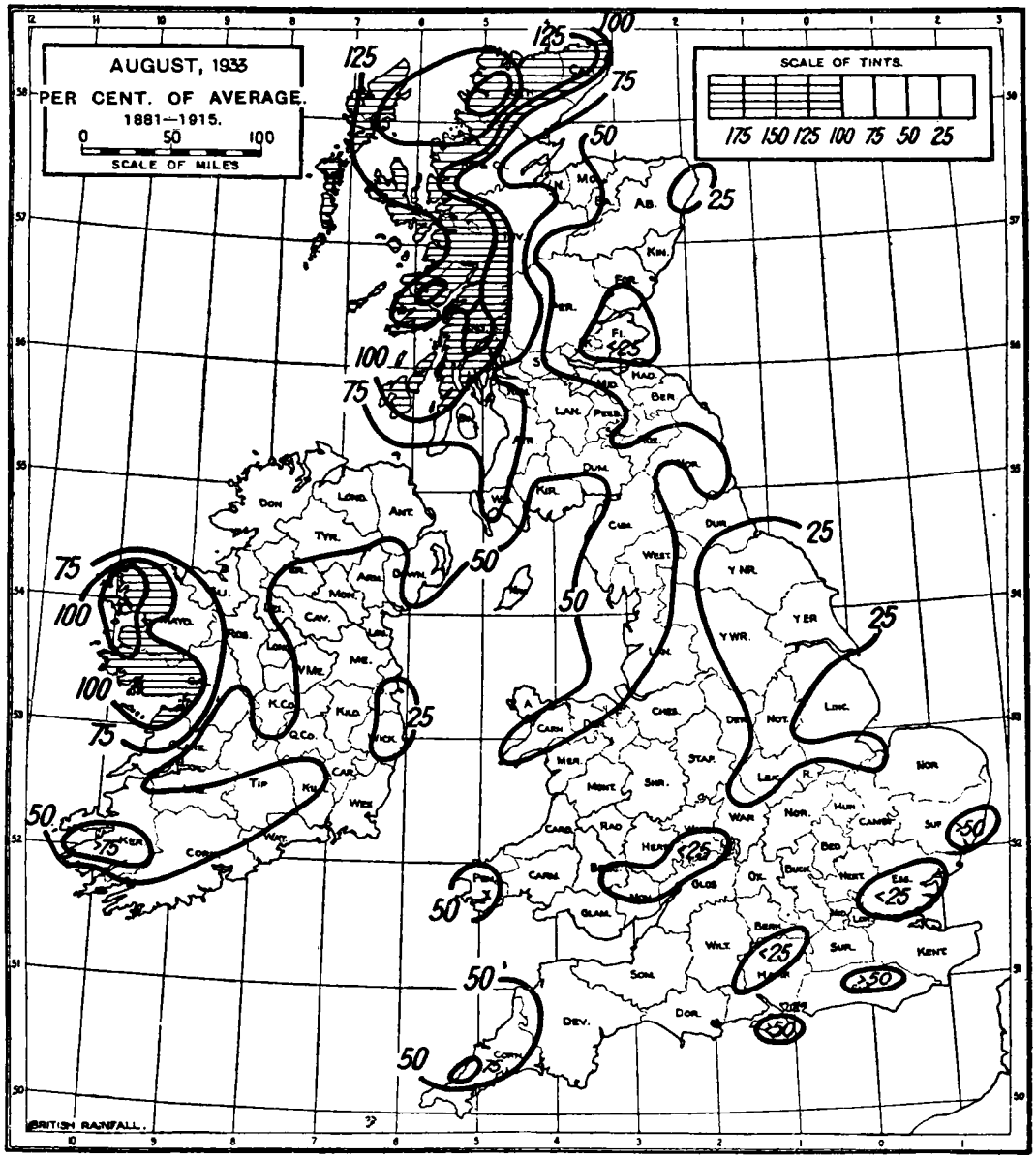
Rainfall, August, 1933.

Greenwich Observatory, *viz.*, 100·0° F. on the 9th. The mean temperature of August, 1933, was also exceeded in August, 1899, which is regarded as the warmest month of any name during the period 1881 to 1910.

The most striking feature of the rainfall map in actual inches is the large areas with less than half an inch of rain. This occurred over large areas in the neighbourhood of the Thames Estuary, over

the Vale of York and stretching as far south as Mansfield and as far north as Hartlepool, as well as over small areas in the south-east of England. Falls of less than one inch were widespread over the south-eastern half of England and Wales, as well as in the neighbourhood of the Firths of Forth and Tay.

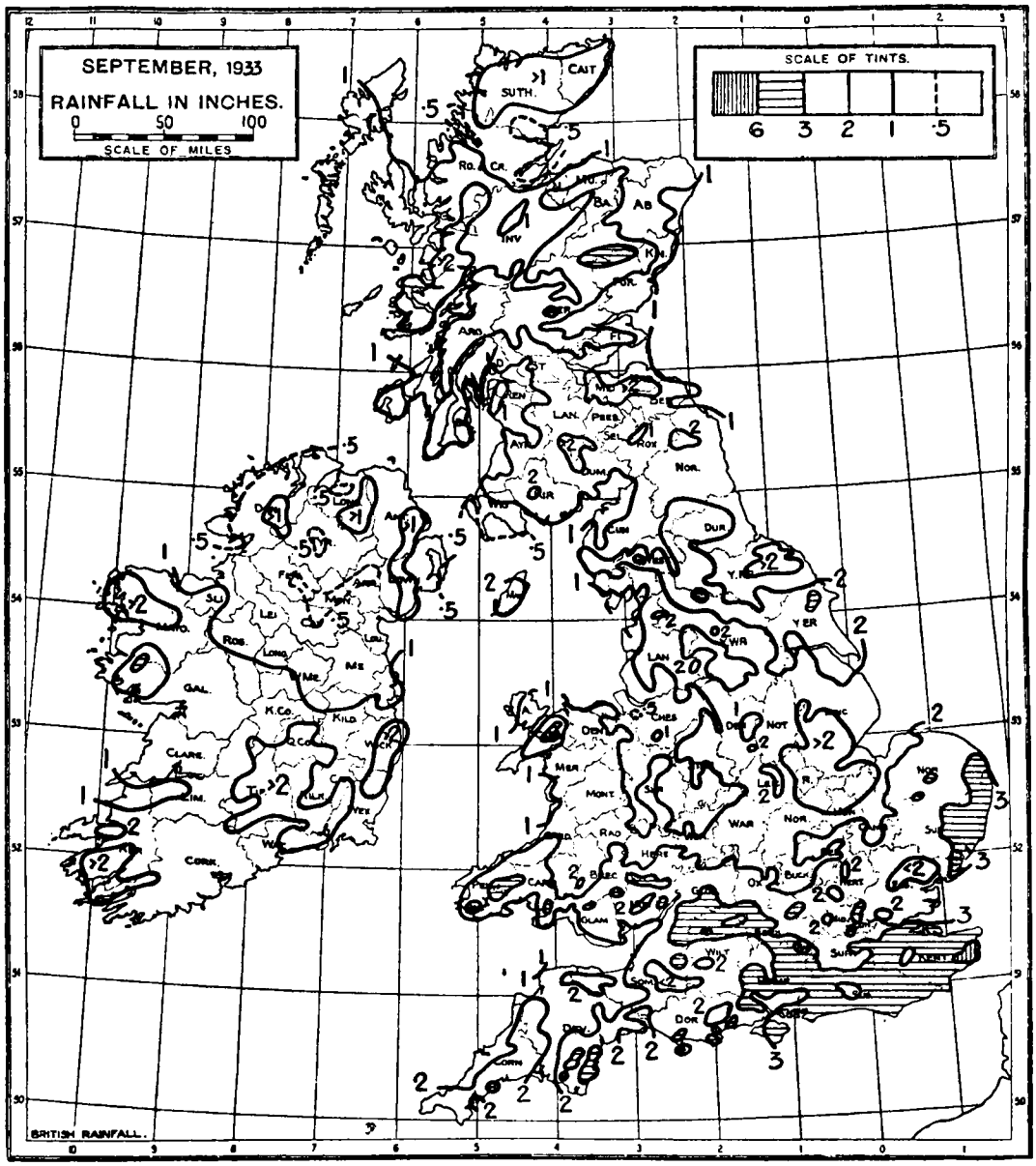
The percentage map shows less than 25 per cent. of the average



Rainfall, August, 1933, as per cent. of average.

in a number of areas, the largest being that from Middlesbrough to Leicester. On the other hand more than the average was recorded over much of the Western Highlands of Scotland and in Connemara, due mainly to the heavy rains of the 1st to 5th and 15th to 27th in the former and of the 16th to 27th in the latter. The extremes were ·35 inch or 12 per cent. at Abergavenny, in Monmouthshire, and 11·04 inches or 189 per cent. at Loch More (Achfary) in Sutherlandshire.

September, like July and August was also unusually warm and sunny. In fact an outstanding feature of the weather of the summer of 1933 was the sequence of these three months, in each of which the mean temperature exceeded the average by over 3° F. The mean excess of sunshine over the country generally during September was 33 hours, the total excess for the four months June to September being

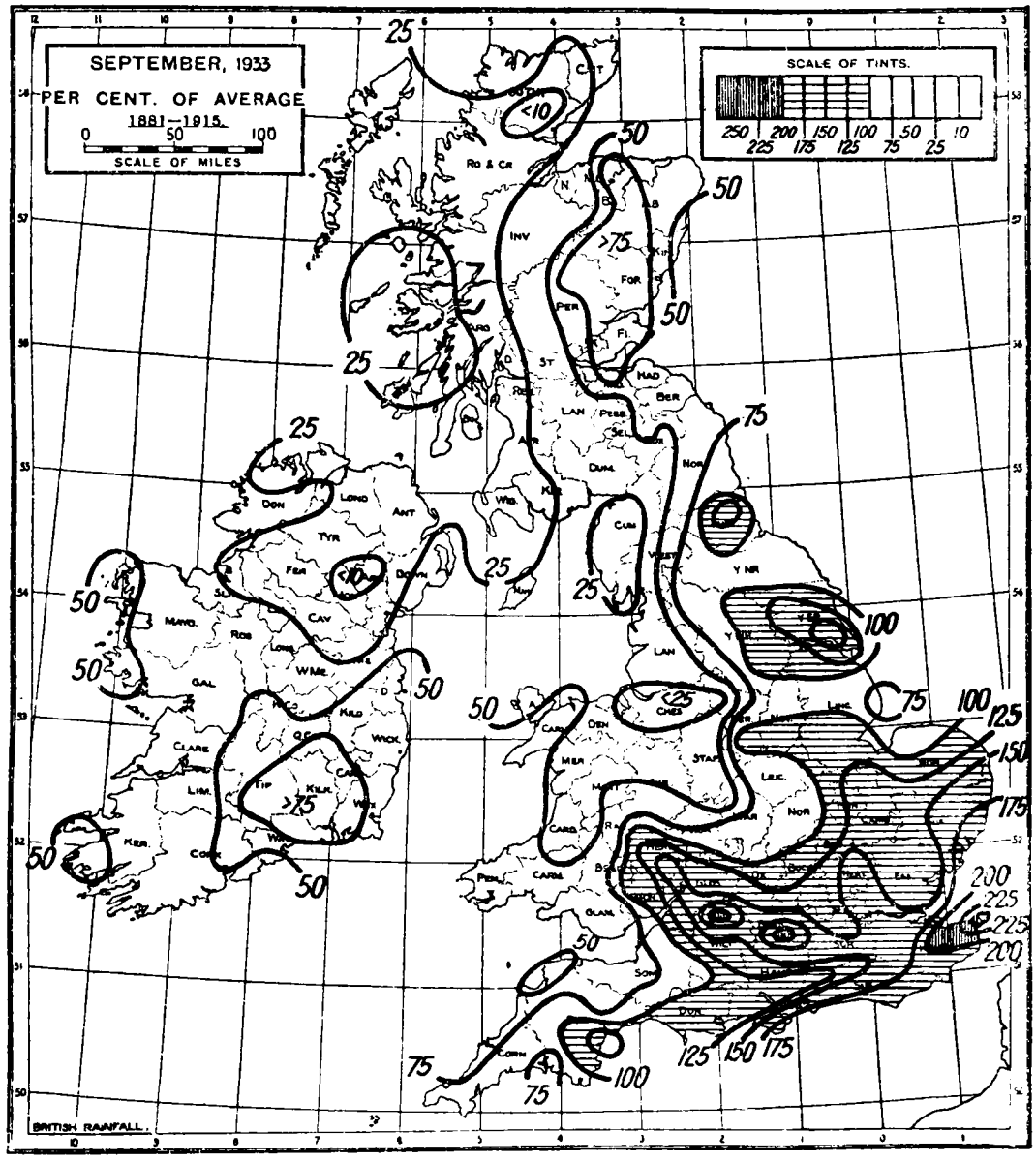


Rainfall, September, 1933.

as much as 106 hours. Many stations in the south-east of England enjoyed nearly 200 hours more than the average for this period.

The distribution on the map of rainfall in actual inches stands out in marked contrast with that of August. In September the largest totals occurred in the south-east of England while unusually small totals were recorded in the north-west. The largest monthly

total was that recorded at Fleet, *viz.*, 7·7 inches, due mainly to the heavy fall of 5·16 inches on the 26th, 7·0 inches at Buckland, near Dover, due to falls of more than one inch on the 21st, 23rd and 24th, and 6·6 inches at Chippenham due to the heavy fall of 4·31 inches on the 26th. Totals of more than 4 inches occurred over large areas in the south-east of England, while the total was less than ·5 inch

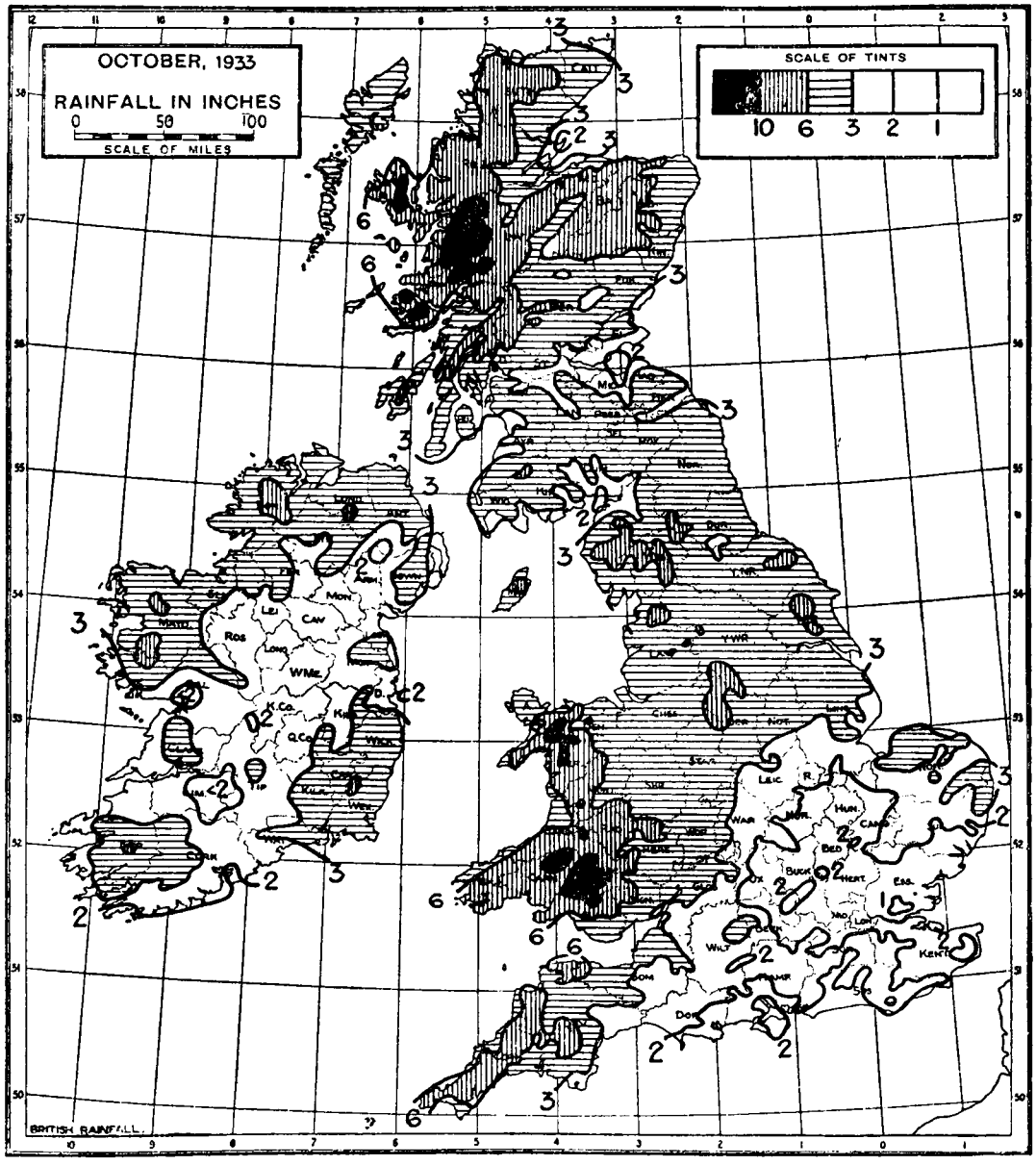


Rainfall, September, 1933, as per cent. of average.

at Chester, at Ullapool, in Ross and Cromarty, near the Moray Firth and at certain stations in the north of Ireland.

The range on the percentage map was from less than 10 per cent. in parts of Sutherlandshire and Co. Armagh to over twice the average at Chippenham and at Fleet, due to the thunderstorm rains of the 26th.

October was generally mild until the 25th and dull over most of the country, except in the south-east where the rainfall was much below the average. The mean pressure for the month was above the average in the west and north and below in the south and east. The isobars of mean pressure crossed the country in a direction from north-west to south-east. The normal south-westerly trend of the isobars



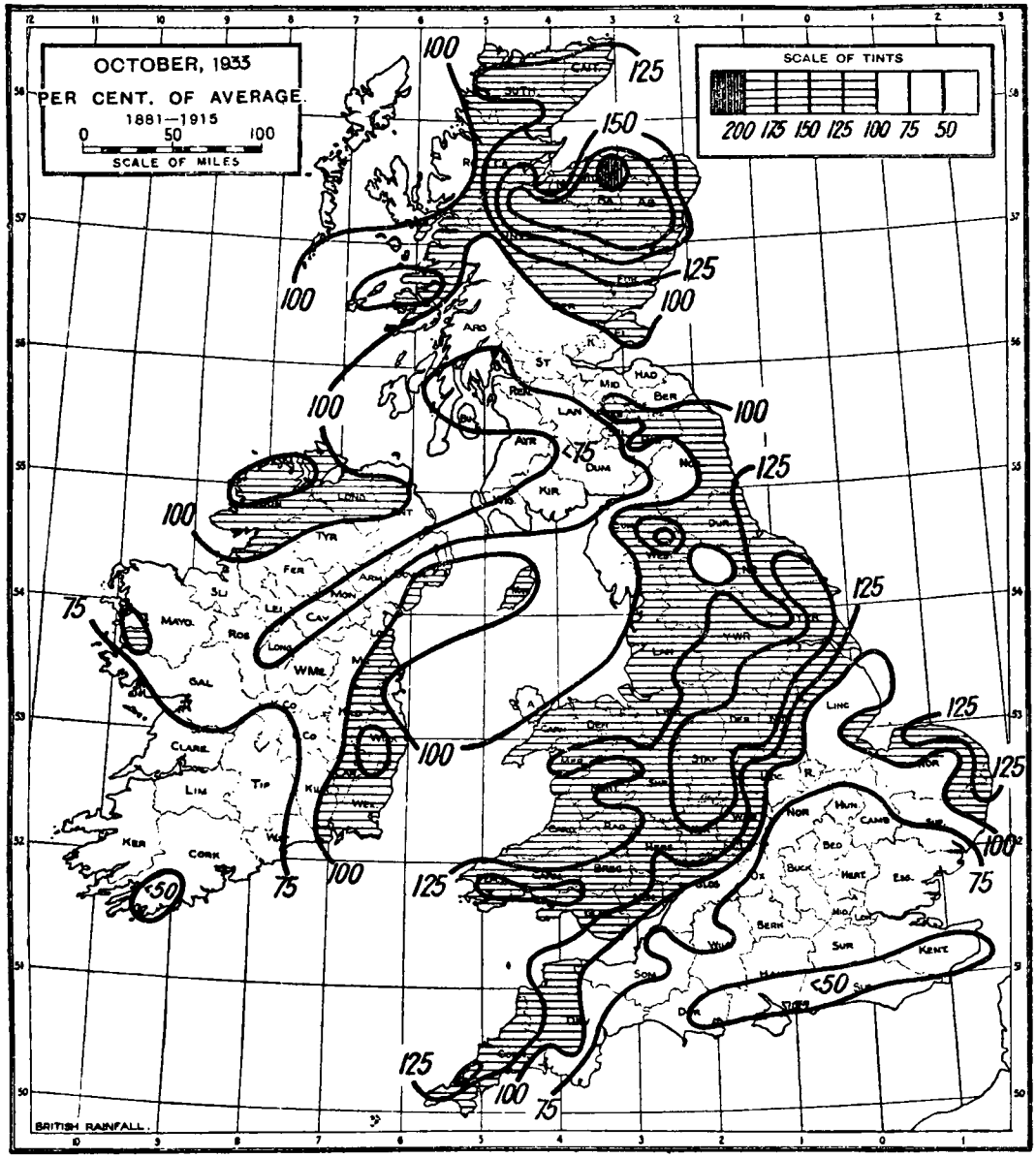
Rainfall, October, 1933.

was often interrupted during the month, there being an unusual prevalence of winds from between north-west and north-east.

The total rainfall for the month was less than one inch to the north of Gravesend, while on the other hand more than 10 inches fell over large areas in Wales and over the Western Highlands of Scotland.

Although the total rainfall over the country approximated

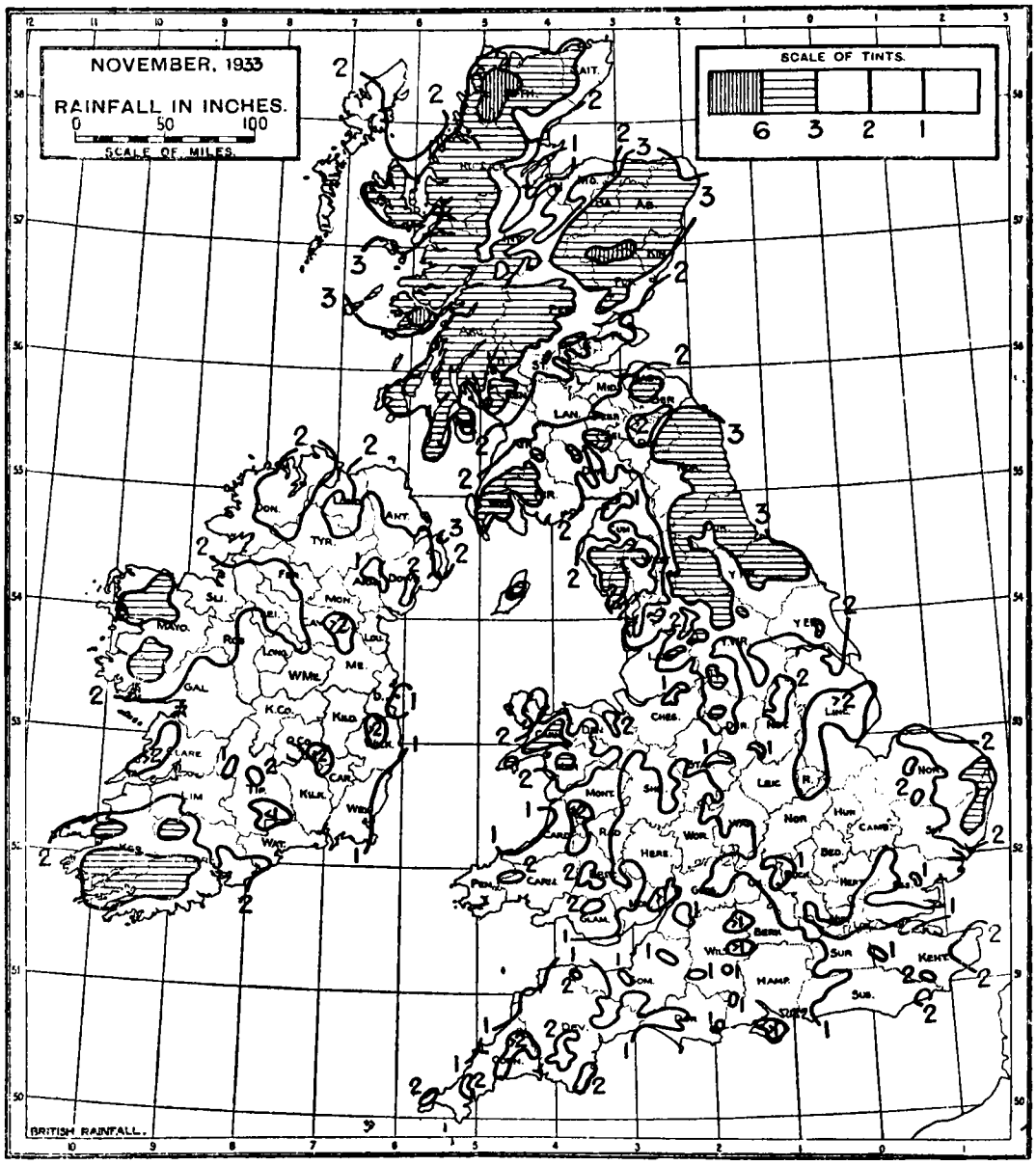
closely to the average, the percentage values for individual stations showed considerable variations. The most striking features of the percentage map are the large area stretching from Weymouth to Margate with less than 50 per cent., and the wet patches with over 125 per cent. stretching from South Wales to the Yorkshire Wolds, with over 150 per cent. from the northern half of the Caledonian Canal



Rainfall, October, 1933, as per cent. of average.

to Aberdeen. The smallest percentage value was 44 at Tenterden in Kent and at Fordingbridge in Hampshire. At Gordon Castle in Moray the large total of 6·38 inches or 202 per cent. was due mainly to the heavy rains of the 22nd to 31st which gave 4·53 inches. The wet belt across the Midlands was due in the main to the heavy widespread rains of October 9th and 10th (see Section 7).

November.—The outstanding feature of the weather of the month was the deficiency of rainfall in the western half of the British Isles, associated with a marked scarcity of winds from the south and south-west. Normally the mean pressure for November varies from 1007 mb. in the north of Scotland to 1014 mb. in the south of England. In November, 1933, the mean pressure in most districts exceeded the



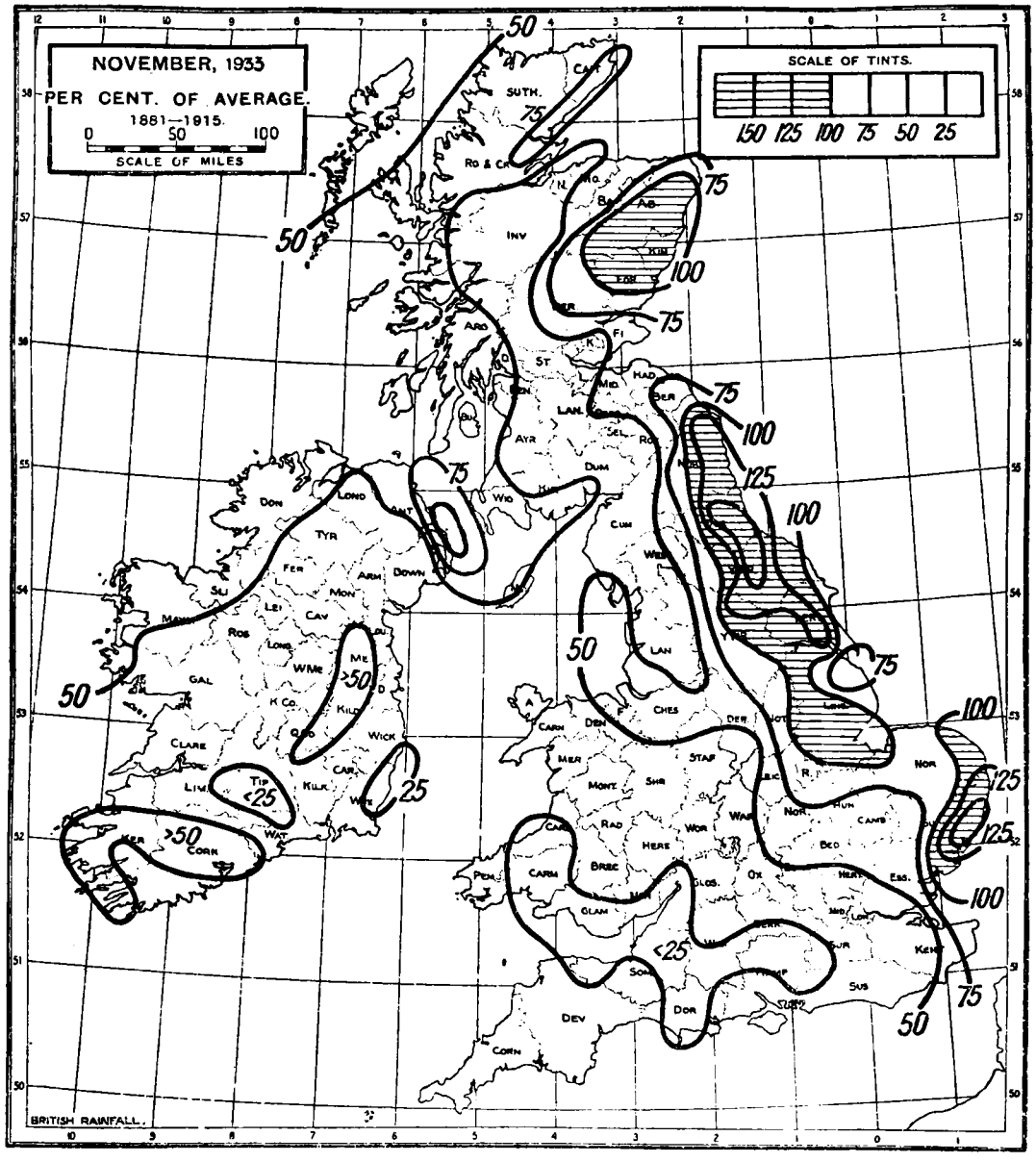
Rainfall, November, 1933.

average and the usual gradient for south-westerly winds was almost entirely destroyed, the mean pressure varying from 1011 mb. in the south-east of England to 1016 mb. in Central Ireland.

The range over the rainfall map in actual inches was less than usual. Interesting features were the large area stretching from Shrewsbury and Wolverhampton to Weymouth and Portsmouth

with less than 1 inch, and the unusually small areas with more than 3 inches. The largest totals of rather more than 6 inches were recorded in Mull and Sutherlandshire.

The percentage map shows that less than 25 per cent. was recorded over a large area stretching from Cardigan to Portland Bill, in the south, and to Surrey in the east, while more than the average fell

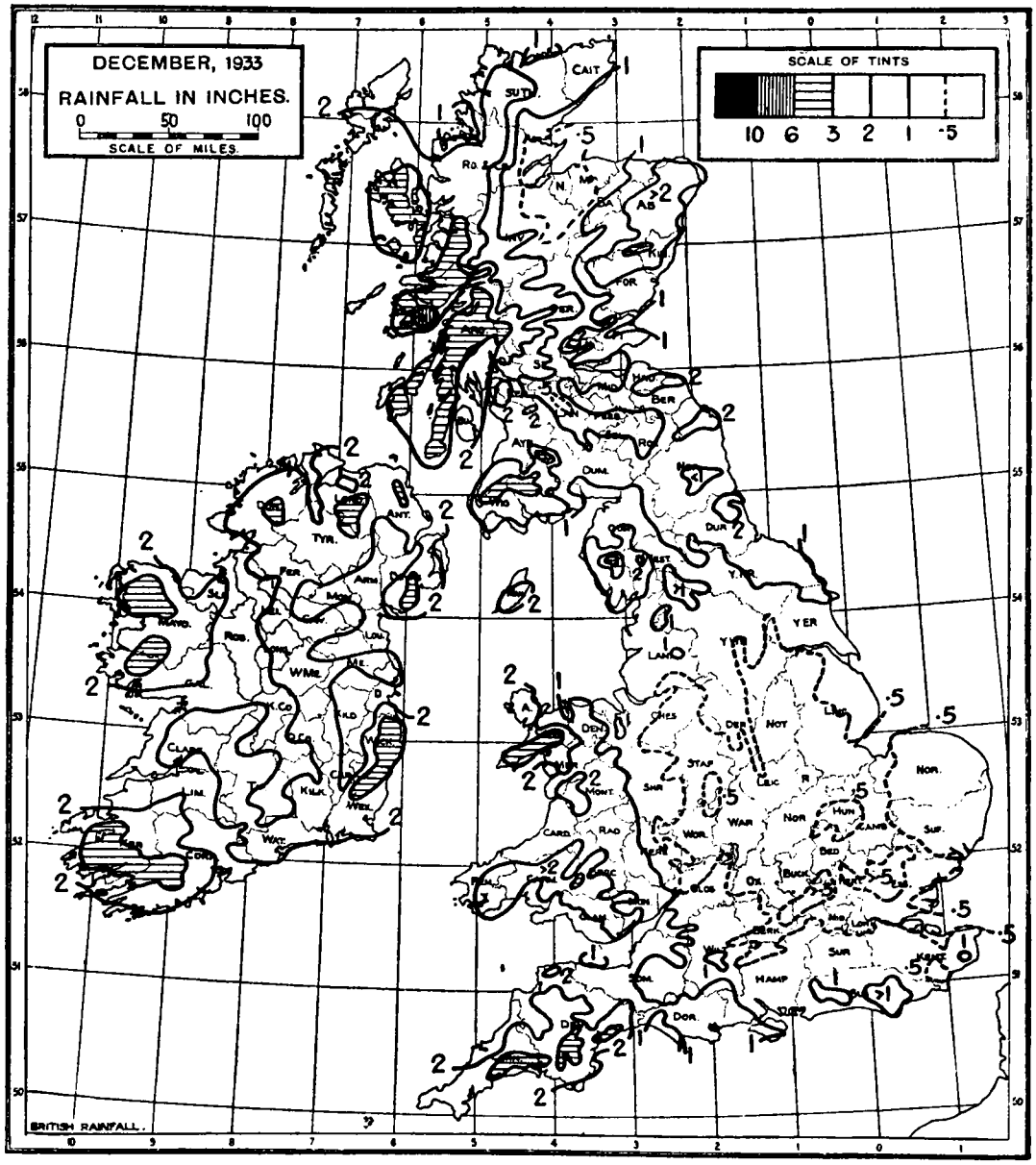


Rainfall, November, 1933, as per cent. of average.

over a number of areas along the east coast of Great Britain. More than 150 per cent. was recorded in the neighbourhood of Middlesbrough and Ipswich. In these areas the wettest periods were from the 1st to 4th and from the 15th to 16th respectively.

Over the British Isles as a whole, November, 1933 was the driest month of that name since 1896.

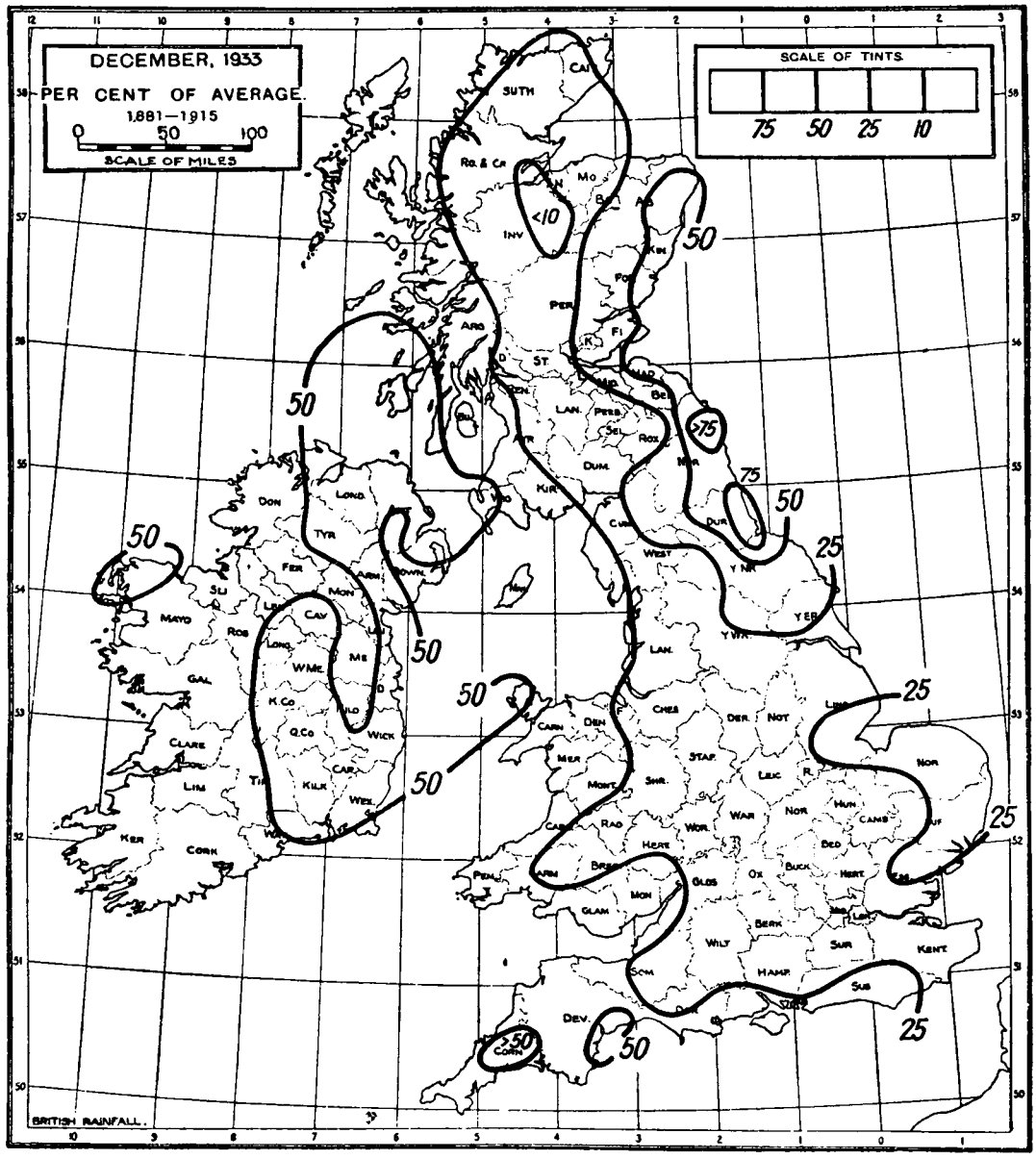
December.—The weather of the month was mainly anticyclonic, exceptionally dry and abnormally cold in southern districts. Over the British Isles generally the month was the driest December since before 1870. On the average December is the wettest month of the year but in 1933 it was the driest. The mean pressure for the month was everywhere markedly above the average, the excess varying from



Rainfall, December, 1933.

17 mb. in the north to 7 mb. in the south. In the east of England winds from between north and east were prevalent. At stations as far apart as Greenwich, Oxford, Ross-on-Wye and Totland Bay, the month was the coldest December since 1890. On the 20th it was reported that the Thames was frozen over in its upper reaches above Oxford.

The most striking feature of the rainfall distribution was the large area with less than half-an-inch stretching from York and Manchester in the north to Andover and Canterbury in the south. The total rainfall was less than 1 inch at most stations and only exceeded 2 inches at stations in the Devon-Cornwall peninsula and in the English Lake District. A number of stations in southern



Rainfall, December, 1933, as per cent. of average.

England and in Scotland recorded the smallest total in December since before 1870.

The total rainfall was less than the average everywhere in the British Isles. There was less than 25 per cent. over a large area stretching from the extreme north of Scotland to the Kentish coast, with less than 10 per cent. in the neighbourhood of the Moray Firth.

Table XX.—*Monthly Rainfall at* 400 *Stations in the British Isles during* 1933.

ENGLAND

County and River Division.		Station.	Jan.	Feb.	Mar.	Apl.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
			in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
London	2	St. Pancras (Camden Square)	1·34	1·46	2·27	·83	1·69	1·85	·92	·58	3·01	1·58	·88	·36	16·77
Surrey	6	Haslemere (U.D.C. Depôt)	3·01	5·41	4·87	·94	2·49	2·04	2·23	1·36	4·30	2·25	1·10	·81	30·81
,,	6	Woking (The Green)	1·63	3·36	2·64	·76	3·58	2·36	1·77	·76	2·35	2·00	·98	·36	22·55
Kent	1	Tenterden (Ashenden)	2·16	1·99	2·30	1·18	1·74	1·28	1·47	·86	4·32	1·52	1·48	·57	20·87
,,	1	Folkestone (Cherry Gdns.)	2·97	2·00	1·79	1·39	2·37	2·03	1·29	·85	6·43	2·33	2·13	·86	26·44
,,	2	Margate (Cliftonville)	1·33	·78	1·02	·77	1·19	1·41	1·16	·67	5·11	1·72	2·10	·41	17·67
,,	3	Teynham (New Gardens)	1·54	1·16	1·96	·65	1·76	1·74	1·17	·42	3·05	1·06	1·25	·40	16·16
,,	4	Strood Waterworks	1·40	1·37	2·46	·60	1·89	·89	3·34	·47	3·30	1·35	1·02	·51	18·60
,,	5	Westerham (Town)	2·32	2·58	3·99	·87	1·94	1·74	2·09	·83	3·14	2·17	1·30	·71	23·68
Sussex	1	Bognor Regis (Waterloo Square)	2·13	2·60	2·56	1·25	2·94	1·55	1·17	1·16	3·77	1·76	1·13	·83	22·85
,,	3	Worthing (Beech House Park)	2·11	1·99	2·15	·89	1·94	2·43	1·00	1·24	3·23	1·39	·95	1·08	20·40
,,	4	Balcombe (The Gables)	2·74	3·97	3·91	·85	1·80	1·94	2·63	1·40	3·52	2·44	1·47	85	27·52
,,	5	Eastbourne (Wilmington Sq.)	2 34	1·92	1·98	1·04	1·23	2·33	1·48	1·17	4·61	2·80	1·24	1·31	23·45
,,	5	St. Leonards (Gensing Gdns.)	2·49	2·01	2·24	1·32	1·62	1·36	1·45	1·34	4·68	2·44	2·33	·78	24·06
,,	7	Crowborough (Uckfield Lodge)	2·75	3·12	3·51	1·07	1·36	1·71	2·53	1·57	4·04	2·65	1·40	·77	26·48
Hampshire	1	Totland Bay (Aston House)	2·02	3·13	3·14	1·54	1·72	·87	1·71	·87	2·48	1·80	·63	1·17	21·08
,,	4	Stockbridge (Houghton Lodge)	2·31	4·41	3·84	1·30	1·47	3·87	2·34	·63	3·44	2·16	·76	·52	27·05
,,	5	Bishops Waltham (Park Ho.)	2·37	3·81	3 65	1·40	2·01	2·06	1·94	·79	2·50	2·02	·76	·67	23·98
,,	8	Sherborne St. John	2·45	4·44	3·04	1·15	2·02	2·66	1·44	·37	4·13	1·81	·46	·45	24·42
Berkshire	4	Bucklebury Place	2·03	3·61	2·88	1·31	1·40	2·13	1·11	·43	3·58	1·81	·92	·37	21·58
,,	5	Upton (Manor House)	1·86	3·65	2·42	1·05	1·42	·81	1·08	·37	2·49	1·42	·67	·39	17·63
Hertfordshire	2	St. Albans (County Museum)	2·21	1·53	3·00	1·17	1·65	1·36	1·14	·56	2·17	1·23	1·34	·58	17·94
,,	3	Royston (Therfield Rectory)	1·29	1·81	1·81	·96	2·11	2·08	·68	1·12	2·82	1·82	1·44	·49	18·43
Buckinghamshire	3	Slough (Upton)	1·78	3·21	2·54	·99	1·47	1·47	1·55	·70	2·45	1·59	·99	·48	19·22
,,	3	Hampden House	2·54	2·49	3·22	1·10	1 73	1·38	2·19	·81	2·33	2·01	1·33	·54	21·67
,,	5	Wolverton (St. George's Vic.)	1·50	1·92	2·29	·75	1·74	2·19	1·46	·85	2·32	1·75	1·63	·32	18·72
Oxfordshire	2	Wootton Rectory	1·77	3·13	2·83	1·54	1·81	2·77	1·56	·96	2·08	1·74	1·05	·40	21·64
Northamptonshire	1	Naseby Reservoir	1·30	1·96	2·62	·70	1·48	2·63	1·81	·80	1·45	2·41	1·69	·41	19·26
,,	4	Wellingborough (Swanspool)	1·01	2·19	2·40	·53	·99	2·14	1·99	·94	1·61	1·60	1·72	·33	17·45
Huntingdonshire	1	St. Ives (Slepe House)	1·09	1·39	1·96	·81	1·55	2·45	1·02	·94	1·85	1·45	1·37	·53	16·41
Bedfordshire	3	Shefford Council School	1·30	1·74	2·13	1·05	2·08	1·35	2·29	1·12	2·31	1·66	1·53	·38	18·94
Cambridgeshire	2	Littleport (Highfield House)	1·25	1·43	1·97	·97	1·67	2·45	2·37	·63	1·90	2·00	1·21	·41	18·26

Table XX.—(*con.*) *Monthly Rainfall*—**ENGLAND**—(*con.*).

County and River		Station.	Jan.	Feb.	Mar.	Apl.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
			in.	in.	in.	in.	in.	in.	in.	in.	n.	in.	in.	in.	in.
Cambridgeshire.	3	Parson Drove (Clows Cross).....	1·40	1·47	2·25	1·14	1·31	1·99	1·09	·62	2·06	2·42	1·64	·36	17·75
Essex	2	Leigh (Brick House).....	1·34	·76	1·06	·68	1·59	2·13	1·65	·57	3·00	1·10	1·09	·59	15·56
,, ...	2	North Weald (Canes).....	1·74	1·14	2·29	·97	1·96	1·91	1·01	·60	3·11	1·69	·90	·50	17·82
,, ...	3	Bradwell-on-Sea (Bradwell Hall)...	1·41	·77	1·12	·54	1·29	1·42	1·41	·35	2·39	1·38	1·24	·38	13·69
,, ...	4	Gt. Bardfield (South Lodge).....	1·57	1·38	2·10	1·35	1·36	2·73	1·96	·73	2·53	1·97	1·02	·47	19·17
Suffolk	1	Hartest (Chadacre Institute)	1·35	1·68	2·21	1·11	1·60	1·67	1·50	1·15	2·49	2·67	1·47	·56	19·46
,, ...	2	Copdock.....	1·03	1·41	1·74	·85	1·18	2·24	1·07	·95	2·45	1·77	1·66	·48	16·83
,, ...	3	Orford (The Gables).....	·97	1·28	1·67	·89	1·80	2·62	1·78	1·31	3·26	2·17	2·72	·69	21·16
,, ...	3	Halesworth Rectory	·85	1·91	1·44	·89	2·14	1·98	1·08	·97	3·71	2·93	2·74	·77	21·41
,, ...	4	Yarmouth (Burgh Hall).....	1·05	1·82	1·88	1·06	1·87	3·06	2·39	1·13	4·14	4·01	3·66	·75	26·82
,, ...	5	Bury St. Edmunds (Westley Ho.)..	1·42	1·88	2·27	1·16	1·56	2·02	2·83	1·03	2·88	2·45	1·71	·54	21·75
Norfolk.....	1	Diss (The Cedars).....	·75	2·12	1·80	1·01	1·99	2·55	1·69	1·33	2·70	2·48	2·10	·49	21·01
,, ...	1	Wymondham.....	·99	2·01	1·34	·90	1·46	2·61	1·65	·66	2·17	2·40	1·70	·57	18·46
,, ...	1	Cawston (The Poplars).....	·86	2·10	2·24	·83	1·92	2·23	1·31	·80	2·36	2·88	2·46	·84	20·83
,, ...	3	Sandringham House Gardens.....	1·36	2·25	2·43	1·55	1·93	2·01	1·14	·47	1·85	3·17	1·90	·62	20·68
,, ...	3	Langham Episcopi Vic.	·90	1·74	2·47	·76	2·31	1·89	1·40	·74	2·49	3·53	2·41	·59	21·23
,, ...	4	Thetford (Waterworks).....	1·03	2·24	1·70	1·28	1·95	1·70	2·45	·94	3·26	2·10	2·05	·55	21·25
,, ...	4	Little Dunham (Dunham Cot.)....	·93	2·42	2·72	1·26	2·19	3·45	2·60	·85	2·46	3·26	2·16	·81	25·11
Wiltshire	1	Bradford (Manvers House).....	2·51	3·15	3·49	1·22	2·54	1·82	3·41	·98	2·55	2·46	·66	1·15	25·94
,, ...	2	Mere (Charnage).....	2·52	3·99	3·45	1·48	2·70	2·20	2·26	·84	1·79	2·62	1·04	·88	25·77
,, ...	3	Larkhill (School of Artillery).....	2·39	4·02	2·75	1·31	1·30	2·24	1·68	·46	2·04	2·34	·80	·49	21·82
,, ...	5	Marlborough (College).....	2·74	4·72	3·32	1·67	1·57	1·99	2·91	·93	2·51	2·97	·65	·57	26·55
Dorsetshire	3	Weymouth (Springfield).....	1·86	3·87	3·20	1·47	1·73	·43	1·80	·53	2·27	1·84	·76	·96	20·72
,, ...	3	Beaminster (Farrs)	3·29	5·30	4·94	2·48	2·43	1·65	2·14	1·75	2·23	2·84	1·04	·93	31·02
,, ...	4	Winterbourne (Whitchurch Vic.)...	2·98	4·87	4·15	1·56	1·52	1·29	2·53	1·20	2·27	2·25	·86	1·22	26·70
,, ...	4	Wimborne (Codford House).....	2·54	4·54	3·55	1·55	1·17	·98	2·05	1·12	1·57	1·61	·77	1·15	22·60
South Devonshire	3	South Brent (Beechfield)	4·48	7·19	6·79	4·75	2·32	2·42	5·65	2·58	2·79	5·18	1·82	3·11	49·08
,, ,,	5	Teignmouth (Den Gardens).....	2·44	4·30	4·05	1·78	1·55	2·24	2·19	1·09	2·83	2·31	·96	2·83	28·57
,, ,,	6	Crediton (Okefield)	1·64	3·64	2·76	1·03	3·51	1·91	1·96	2·78	1·62	3·00	1·07	1·67	26·59
,, ,,	7	Ottery St. Mary (West Hill).....	2·59	5·48	3·82	2·03	2·46	3·14	2·20	1·02	2·20	2·53	1·14	2·83	31·44
North Devonshire	1	Ilfracombe (Langleigh).....	3·10	3·72	3·49	2·16	2·36	1·72	4·15	1·42	1·29	6·88	·87	1·87	33·03
,, ,,	3	Okehampton (Uplands)	5·02	6·02	5·64	1·42	3·14	1·81	3·26	1·91	2·82	6·41	1·70	2·71	41·86

Table XX.—(*con.*) *Monthly Rainfall*—**ENGLAND**—(*con.*).

County and River Division.		Station.	Jan.	Feb.	Mar.	Apl.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
			in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
North Devonshire	3	Dolton (Hilliers)	2·29	3·41	2·61	1·16	2·11	1·70	2·56	1·45	1·37	4·50	1·37	2·02	26·55
Cornwall	1	Redruth (Trewirgie)	3·92	4·05	4·81	2·66	2·77	2·04	2·81	3·13	1·96	8·64	2·18	2·71	41·68
,,	1	Newquay (Mount Wise)	2·66	3·01	3·07	1·39	1·89	1·85	3·35	1·66	1·59	5·27	1·01	1·47	28·22
,,	1	Bude (School House)	3·51	2·12	3·17	1·41	1·51	1·03	2·34	1·35	2·24	5·07	·97	1·32	26·04
,,	2	Penzance (Morrab Gardens)	3·18	3·59	4·37	2·72	2·74	1·94	2·47	1·49	2·79	6·53	1·76	2·48	36·06
,,	2	St. Austell (Trevarna)	3·22	4·31	4·33	2·69	3·51	3·07	3·28	1·97	2·67	7·05	2·17	3·93	42·20
,,	2	Liskeard (Penmilder)	2·92	4·50	4·21	2·55	1·95	3·16	4·47	2·83	2·66	5·43	1·84	3·38	39·90
,,	2	Bolventor Vicarage	5·48	5·88	6·27	3·13	3·68	3·93	4·47	2·77	2·46	8·23	2·01	2·82	51·13
,,	3	Devonport (Empacombe)	2·47	3·91	3·63	2·60	1·81	2·33	2·76	1·95	1·83	3·06	1·89	2·85	31·09
,,	4	Tresco Abbey	2·91	2·99	2·90	1·97	2·86	2·05	1·42	1·03	2·58	5·42	1·85	2·33	30·31
Somersetshire	1	Long Ashton (Research Stn.)	3·56	3·93	3·71	1·18	2·22	1·19	1·96	1·41	2·35	2·84	·57	1·43	26·35
,,	2	Street (Portway)	2·06	3·78	2·38	1·37	1·87	1·35	2·66	·83	1·96	2·81	·70	·83	22·60
,,	2	Burnham (Chalbury)	1·71	4·40	2·23	1·69	1·85	1·70	1·11	1·28	2·38	3·69	·77	1·27	24·08
,,	3	Taunton (The Park)	2·07	4·20	2·63	1·05	1·87	3·13	2·09	1·46	1·69	2·75	·64	1·03	24·61
,,	5	Brushford Rectory	3·15	4·87	3·65	1·39	2·93	1·68	1·79	1·36	1·46	4·98	1·07	1·26	29·59
Gloucestershire	3	Nailsworth (Three Corners)	2·74	3·59	3·15	1·21	2·16	1·64	1·91	1·00	3·08	3·40	·67	·57	25·12
,,	3	Cheltenham (Montpellier Gdns.)	2·39	3·97	2·21	·90	2·12	2·14	1·66	·39	2·73	3·57	·73	·45	23·26
,,	4	Blockley	2·43	3·35	2·47	·86	1·60	1·52	1·26	·67	2·01	2·52	1·38	·39	20·46
,,	7	Lechlade (Claydon House)	1·91	3·37	2·86	1·24	1·12	2·22	1·50	1·34	2·77	2·08	·75	·53	21·69
Herefordshire	1	Ross (Birchlea)	2·55	3·89	2·60	1·02	2·11	2·15	1·80	·64	3·03	3·73	·67	·77	24·96
,,	1	Weobley School	1·86	4·06	2·35	·94	1·56	1·65	1·28	1·02	1·31	6·02	·71	·70	23·46
Shropshire	3	Bromfield (Warwick House)	1·85	3·49	2·55	·84	1·48	2·22	2·02	1·30	·95	5·09	·67	·54	23·00
,,	3	Bishops Castle (The Vicarage)	2·21	3·84	2·30	·60	1·60	2·65	1·80	·89	·77	5·11	·61	·79	23·17
,,	4	Shifnal (Hatton Grange)	1·77	3·30	2·24	1·04	1·85	2·83	3·04	1·07	·65	4·71	1·17	·52	24·19
Staffordshire	2	Kingswinford (Ashwood P.S.)	1·78	3·26	2·45	·97	1·68	2·61	1·76	·84	·85	4·79	·94	·34	22·27
,,	2	Market Drayton (Old Springs)	1·49	2·50	2·68	·86	1·58	1·74	2·47	·96	·78	4·82	1·32	·40	21·60
,,	3	Lichfield (St. John Street)	1·77	4·29	3·01	·68	1·71	3·45	2·30	·82	1·19	3·41	1·47	·57	24·67
,,	3	Stafford (Victoria Pleasure Gd.)	1·96	4·14	2·67	1·28	1·26	2·81	2·75	1·23	1·16	5·02	1·15	·45	25·88
,,	5	Mayfield	2·11	4·47	2·63	1·10	1·84	2·06	3·26	·74	1·17	5·22	1·50	·43	26·53
Worcestershire	1	Malvern (Free Library)	2·02	3·32	2·46	1·15	2·20	2·46	1·61	·67	1·93	4·22	·67	·43	23·14
,,	2	Bewdley (C.E. School)	1·97	3·25	2·60	·79	2·14	1·65	1·79	·62	·49	4·44	·91	·31	20·96
,,	3	Redditch (Hewell Gardens)	1·96	2·66	2·27	·99	1·39	2·11	1·37	·66	1·04	3·02	·90	·42	18·79

Table XX.—(*con.*) *Monthly Rainfall*—**ENGLAND**—(*con.*).

County and River Division.		Station.	Jan.	Feb.	Mar.	Apl.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
			in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
Warwickshire ..	1	Warwick Castle Gardens.....	1·33	2·97	2·90	1·10	1·66	1·67	1·68	·89	1·24	3·04	·84	·28	19·60
,, ..	1	Coventry (City Hospital)	2·02	2·99	2·89	1·04	1·27	2·50	2·30	·84	1·98	2·48	1·27	·26	21·84
Leicestershire ..	4	Loughborough (Nan Pantan Res.)..	1·98	2·69	2·81	1·24	1·89	3·28	2·32	·73	2·12	3·25	1·59	·31	24·21
,, ..	4	Grantham (Belvoir Castle Gdns.)..	1·81	2·06	2·85	·96	1·51	2·24	1·76	·63	2·04	2·74	1·94	·35	20·89
Rutlandshire...	1	Uppingham (Ridlington)	1·23	2·85	2·71	·79	1·43	2·70	1·24	·73	2·09	2·53	2·00	·35	20·65
Lincolnshire....	2	Market Deeping (Wilsthorpe).....	·94	1·35	1·84	1·00	·98	4·19	·73	·65	2·06	2·24	1·89	·28	18·15
,, ...	3	Boston (Black Sluice, Skirbeck)....	1·48	1·64	2·28	1·22	1·56	2·14	1·12	·40	1·99	3·18	2·29	·67	19·97
,, ...	3	Cranwell (Aerodrome).....	1·46	1·72	2·61	1·44	1·28	2·05	1·69	·48	2·07	2·59	2·15	·37	19·91
,, ...	3	Hackthorn Hall.....	1·60	2·08	3·16	·90	2·08	1·95	·88	·28	1·89	3·95	1·92	·45	21·14
,, ...	4	Skegness (Marine Gardens).....	1·20	1·03	2·02	1·00	1·52	1·77	·75	·76	1·11	2·73	1·94	·56	16·39
,, ...	4	Louth (Westgate)	1·61	2·39	2·63	·75	1·68	1·87	1·50	1·03	1·65	3·08	1·87	·68	20·74
,, ...	5	Brigg (Wrawby Road).....	1·65	2·35	2·15	·97	1·99	1·85	1·48	·35	1·79	5·14	1·63	·33	21·68
Nottingham....	2	Newark.....	2·13	2·09	2·66	·76	1·46	2·39	1·61	·61	1·84	3·33	1·59	·27	20·74
,, ...	5	Mansfield (West Bank).....	2·47	3·92	2·91	·91	2·27	1·58	2·81	·43	1·06	5·27	2·13	·47	26·23
Derbyshire.....	5	Littleover (The Knoll).....	1·33	3·70	2·52	·84	1·76	2·37	2·23	·76	1·83	4·66	1·18	·67	23·85
,, ...	6	Matlock Bath (Lower Tower).....	2·47	4·60	2·79	1·17	2·21	1·89	2·48	·55	1·11	5·06	1·74	·49	26·56
,, ...	6	Buxton (Terrace Slopes).....	2·85	4·66	3·46	1·71	1·79	4·62	3·17	1·41	·81	7·00	2·50	·52	34·50
Cheshire.....	1	Altrincham (Burlington Cot.).....	1·86	2·90	2·63	1·01	1·81	2·90	1·94	1·52	·97	4·30	·96	·30	23·10
,, ...	2	Northwich (Winnington)	1·47	2·65	1·99	·98	1·13	2·34	1·75	·81	·84	3·80	1·08	·36	19·20
,, ...	4	Eccleston	1·64	2·25	2·11	1·02	1·20	1·51	1·33	·76	·59	3·48	1·79	·79	18·47
,, ...	4	Neston (Vine House).....	1·32	2·66	1·96	·69	1·64	1·48	1·27	1·76	·70	3·80	1·23	·63	19·14
South Lancashire	3	Bolton (Queen's Park).....	2·40	4·13	3·00	1·85	1·95	3·96	2·82	2·51	1·01	5·12	2·32	·73	31·80
Central ,,	1	Burnley (Swinden)	3·73	4·28	2·66	1·98	2·78	1·89	3·41	1·62	2·78	4·78	3·33	·71	33·95
,, ,,	3	Southport (Hesketh Park).....	2·30	2·88	2·20	1·48	1·62	1·42	1·88	1·76	·77	3·87	1·56	·83	22·57
North ,,	1	Ulverston (Poaka Beck).....	3·52	4·86	4·30	3·16	4·19	2·48	4·27	4·76	·95	4·57	3·52	1·80	42·38
,, ,,	4	Lancaster (Greg Obsy.).....	3·57	4·08	2·23	2·08	3·10	1·67	4·47	2·98	1·05	5·04	1·81	·70	32·78
,, ,,	5	Barton (Newsham House).....	3·03	3·32	2·45	2·07	2·38	1·99	3·29	3·03	1·03	4·74	2·07	·80	30·20
Yorkshire, W.R.	2	Settle (Gas Works).....	3·53	4·62	2·78	1·68	2·03	1·65	5·52	1·59	1·99	4·11	2·64	·65	32·79
,, ,,	7	Sheffield (Weston Park).....	2·09	4·46	2·53	1·33	1·89	1·05	2·09	·45	1·62	5·04	1·83	·58	24·96
,, ,,	7	Doncaster (Avenue Road).....	2·12	3·91	3·30	·88	3·00	2·66	1·45	·42	2·00	5·57	2·02	·39	27·72
,, ,,	8	Meltham (Harewood Lodge).....	4·55	6·89	3·23	1·14	1·92	2·55	3·38	1·89	2·71	5·05	1·80	·66	35·77
,, ,,	9	Leeds (Wortley Reservoir).....	1·80	3·85	1·78	1·50	3·37	1·00	2·04	·45	1·43	3·68	1·89	·44	23·23
,, ,,	10	Ilkley (Spence's Garden).....	1·78	5·79	2·17	1·89	3·30	2·21	1·84	·40	1·48	3·99	3·20	·62	28·67

Table XX.—(*con.*) *Monthly Rainfall*—**ENGLAND**—(*con.*).

County and River Division.		Station.	Jan.	Feb.	Mar.	Apl.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
			in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
Yorkshire, W.R.	10	York (Cherry Hill)	1·92	4·25	1·66	1·74	2·13	1·50	·89	·42	2·23	3·45	2·40	·61	23·20
,, ,,	10	Buckden	4·30	8·39	3·58	1·66	2·61	2·14	4·83	1·79	2·22	4·06	4·15	·90	40·63
,, ,,	11	Knaresborough (The Abbey)	2·22	4·81	1·70	1·38	3·14	1·36	1·95	·51	2·10	3·58	2·85	·83	26·43
,, E.R.	2	Birdsall Gardens	2·11	5·48	2·26	·96	2·04	2·41	1·36	·25	2·26	4·33	2·96	·87	27·29
,, ,,	3	Patrington (Rose Cottage)	1·32	2·81	2·04	1·06	1·59	·85	1·12	·23	2·08	4·29	2·68	·59	20·66
,, ,,	3	Holme-on-Spalding Moor	1·86	4·14	2·49	1·26	2·65	2·66	1·27	·45	1·96	5·56	2·22	·68	27·20
,, ,,	3	Beverley (E. Riding Mental Hosp.)	1·60	4·58	2·44	1·04	2·17	2·67	·94	·43	2·80	6·01	2·93	·48	28·09
,, ,,	4	Bridlington (Corpn. Nurseries)	1·47	3·22	2·02	1·10	2·12	1·37	1·47	·30	2·35	5·29	2·19	1·02	23·92
,, N.R.	1	Masham Moor (Roundhill Res.)	3·40	6·49	2·40	1·54	3·38	1·12	3·46	·52	2·69	4·11	4·23	·85	34·19
,, ,,	2	Felixkirk (Mount St. John)	1·98	5·66	1·89	1·44	2·37	1·68	2·46	·45	1·50	4·29	4·07	·99	28·78
,, ,,	2	Reeth (Arkengarthdale)	2·40	5·87	(2·60)	1·29	2·87	(2·58)	2·76	·83	2·60	4·39	4·17	1·19	(33·55)
,, ,,	4	Pickering (Hungate Hall)	1·79	4·12	2·51	1·94	2·81	1·96	1·25	·28	1·70	4·88	3·06	1·03	27·33
,, ,,	5	Whitby (Mulgrave Castle)	2·52	2·98	1·84	·75	2·16	2·38	2·93	·25	1·91	4·96	3·42	1·43	27·53
,, ,,	6	Middlesbrough (Albert Park)	2·39	3·04	1·41	·94	1·98	1·62	1·64	·52	1·32	3·88	3·24	1·61	23·59
Durham	2	Burnhope (Lodgegill Mine)	6·30	5·10	3·25	3·75	3·25	3·55	4·80	2·30	2·85	6·60	3·95	1·65	47·35
,,	2	Durham (Houghall, Hort. Stn.)	1·57	4·25	·95	1·00	1·93	1·25	2·07	·98	2·05	3·24	3·57	2·03	24·89
,,	2	Weardale W.W. (Waskerley)	2·02	4·40	1·43	1·53	3·45	2·67	2·65	1·55	2·81	4·59	3·50	1·83	32·43
,,	2	Sunderland (W. Hendon Ho.)	2·08	2·83	1·24	·94	1·37	2·02	1·87	1·31	1·77	4·08	4·54	2·22	26·27
Northumberland	3	Corbridge (Howden Dene)	1·61	4·49	1·16	1·51	1·81	2·39	1·66	1·52	2·13	3·44	3·86	1·16	26·74
,,	4	Bellingham (Highgreen)	2·39	4·07	1·09	1·47	1·87	1·94	2·23	1·72	1·46	3·44	2·69	1·08	25·45
,,	5	Morpeth (Cockle Park)	1·88	3·27	1·32	1·85	1·27	1·10	2·00	1·89	1·34	4·08	3·36	1·27	24·63
,,	5	Fontburn Res. (Tynemouth W.W.)	1·56	3·49	1·03	1·71	2·23	1·46	2·12	1·68	1·63	4·38	3·89	1·45	26·63
,,	6	Wooperton	1·67	3·75	·86	1·63	1·60	1·95	2·38	1·76	1·59	4·65	4·15	1·83	27·82
,,	6	Ilderton (Lilburn Tower Gdns.)	1·37	3·95	·86	1·59	1·54	1·73	2·87	1·86	1·48	4·51	4·46	2·04	28·26
Cumberland	1	Penrith (Laurel Bank)	4·03	3·65	2·37	1·05	2·59	1·75	2·70	1·80	1·46	3·33	1·67	·53	26·93
,,	1	Geltsdale	3·32	2·77	2·37	1·65	2·73	2·35	3·91	2·81	1·19	3·83	2·00	1·12	30·05
,,	1	Carlisle (Scaleby Hall)	2·63	2·56	2·79	1·55	2·08	2·04	3·50	2·30	·68	2·40	·85	·85	24·23
,,	2	Borrowdale (Stockley Bridge)	16·75	(17·75)	(9·75)	5·50	4·75	4·50	10·50	7·50	2·25	9·25	3·25	4·25	96·00
,,	2	Keswick (Derwent Island)	9·28	6·37	3·88	1·77	3·22	2·77	4·63	3·21	1·03	6·08	1·82	·59	44·65
,,	3	St. Bees (Fern Bank)	3·50	3·68	3·11	2·13	2·72	2·17	3·04	2·45	1·80	3·37	2·50	1·35	31·82
Westmorland	1	Kirkby Stephen (Eden Place)	4·07	4·33	2·12	1·20	2·88	1·93	2·45	1·39	1·42	5·36	3·24	·71	31·10
,,	1	Appleby (Castle Bank)	4·28	2·51	1·79	1·29	3·43	1·95	2·33	2·10	1·51	5·29	1·99	1·15	29·62
,,	3	Kendal (Highgate)	3·63	3·99	3·34	2·32	1·82	2·01	2·80	2·95	1·01	4·39	1·81	·96	31·03

Table XX.—(*con.*) *Monthly Rainfall*—**MONMOUTH AND WALES, AND THE ISLANDS.**

County and River Division.		Station.	Jan.	Feb.	Mar.	Apl.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
			in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
Monmouth	3	Newport W.W. (Nantypridd)	3·21	3·96	4·09	1·72	2·76	1·25	1·88	1·48	2·33	5·26	1·08	1·41	30·43
,,	3	Abergavenny (The Chain)	4·03	5·62	3·69	·91	3·11	5·12	2·01	·30	2·24	5·08	1·24	1·81	35·16
Glamorgan	3	Swansea (Victoria Park)	2·95	4·75	2·85	2·30	1·72	2·21	4·08	1·59	1·50	8·82	1·36	1·77	35·90
,,	5	Bridgend (Eiw Graig)	2·60	4·04	3·22	2·73	1·69	2·18	3·39	1·35	2·05	5·88	1·44	1·52	32·09
,,	6	Treherbert (Tyn-y-waun)	9·91	10·67	8·05	3·42	2·20	3·46	7·96	2·45	2·89	11·34	2·44	3·17	67·96
,,	7	Cardiff (Roath Park)	3·00	4·73	3·74	2·04	2·76	1·55	2·30	1·27	1·77	5·01	·88	2·39	31·44
Carmarthen	2	Carmarthen (The Friary)	4·63	3·94	3·46	2·20	2·21	1·93	3·41	2·01	1·99	8·25	·89	1·42	36·34
,,	2	Abergorlech	5·88	6·28	5·25	2·24	2·34	3·37	4·50	1·91	1·84	11·47	1·29	2·33	48·70
Pembroke	4	Pembroke (Stackpole Court)	4·23	3·72	2·67	1·80	3·53	2·46	1·67	1·55	1·36	8·23	1·60	2·94	35·76
,,	4	Saundersfoot (Hean Castle)	3·29	3·74	2·12	1·33	2·04	1·82	1·76	1·72	1·59	7·41	1·53	2·30	30·65
,,	4	Haverfordwest (Grammar School)	5·06	3·79	3·34	1·32	2·43	2·68	2·39	2·39	2·62	8·16	1·81	2·34	38·33
Cardigan	2	Aberystwyth (Plant Breeding Stn.)	4·05	3·42	2·61	·75	1·19	2·80	1·57	1·46	1·17	5·39	1·02	1·53	26·96
,,	3	Cardigan (County School)	5·54	3·01	2·37	·85	1·62	2·84	1·27	1·42	2·36	5·92	·99	1·53	29·72
,,	3	Lampeter (Falcondale)	5·26	6·89	4·62	1·10	1·70	3·52	2·68	1·70	1·18	7·88	1·75	1·44	39·72
,,	5	Plynlimon	10·00	7·50	6·50	1·50	3·50	7·00	5·00	3·50	1·50	9·50	2·50	3·50	61·50
Brecon	7	Swansea W.W. (Cray Res.) No. 1	7·58	7·57	7·03	2·22	2·47	4·02	6·69	1·77	1·63	10·28	1·75	1·95	54·96
,,	8	Birmingham W.W. (Cors-yr-hwch)	9·00	7·87	6·30	1·96	2·60	6·77	5·50	2·90	(1·91)	(10·97)	2·60	1·70	(60·08)
Radnor	1	Llandrindod Wells (Disserth Rec.)	3·81	4·29	3·39	1·15	1·46	4·87	3·01	1·08	1·49	7·10	1·08	1·59	34·32
Montgomery	4	Newtown (Penarth Weir)	2·50	3·54	2·16	·61	1·99	4·22	2·05	1·12	1·31	5·53	1·28	1·08	27·39
,,	5	Llandysilio Rectory	1·58	2·26	1·54	·48	1·23	·87	1·66	·82	·42	4·11	·77	·47	16·21
,,	5	Lake Vyrnwy	5·67	8·27	3·71	1·71	1·55	3·50	3·78	1·60	1·33	6·30	1·62	1·77	40·81
Flint	2	Rhyl (Sewage Works)	2·26	1·65	1·55	·60	1·06	1·13	·67	1·63	1·01	4·35	1·33	·86	18·10
Denbigh	1	Wrexham (Packsaddle Res.)	2·36	2·83	2·28	91	1·77	1·89	1·03	1·16	·90	4·19	1·69	·85	21·86
,,	2	Llangynhafal (Plâs Drâw)	2·63	3·17	1·81	·92	2·07	1·48	1·46	1·42	1·05	4·96	1·93	·94	23·84
,,	3	Pentre Voelas (Voelas Hall)	6·40	4·81	3·05	1·25	1·68	3·13	3·16	1·55	1·23	6·05	2·14	1·35	35·80
Merioneth	3	Festiniog (Hafod Fawr)	8·62	6·41	3·11	1·61	1·75	5·57	4·28	2·81	1·39	8·14	2·52	2·03	48·24
,,	4	Dolgelly (Bontddu)	7·65	5·94	3·36	·88	2·94	5·52	2·92	2·27	1·77	8·19	2·18	2·26	45·88
Carnarvon	2	Llandudno (Cricket Ground)	3·18	2·83	1·56	·62	1·10	1·59	1·35	1·44	1·13	3·61	1·41	1·28	21·10
,,	3	Bethesda (Penrhyn Quarries)	9·13	4·06	4·34	1·34	2·54	4·45	3·12	2·72	2·97	6·21	3·34	1·46	45·68
,,	4	Pwllheli (Bodfean Hall Gardens)	5·25	3·52	2·21	2·01	1·92	2·37	2·87	3·53	1·87	6·06	2·89	3·98	38·48
,,	5	Snowdon (Cwm Dyli)	12·10	9·86	6·46	3·66	3·49	8·96	9·40	5·80	2·64	14·50	3·42	3·09	83·38

Table XX.—(*con.*) *Monthly Rainfall*—**MONMOUTH AND WALES**—(*con.*).

County and River Division.	Station.	Jan.	Feb.	Mar.	Apl.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
		in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
Anglesey.....	Holyhead (Salt Island).....	3·93	2·05	2·18	·90	1·49	1·39	1·42	1·44	·94	3·48	1·81	2·33	23·36
,, ...	Llanerchymedd (Llwydiarth Esgob)	4·29	2·51	3·13	1·40	1·84	1·88	1·74	2·26	1·44	4·52	1·97	2·14	29·12
	ISLE OF MAN.													
Isle of Man.....	Douglas (Borough Cemetery).....	3·98	4·24	3·34	2·04	2·33	2·70	2·06	1·22	·98	5·39	2·40	2·08	32·76
,, ...	Ramsey (North Promenade).....	6·19	2·19	3·48	1·77	1·97	1·74	1·57	·80	·87	4·42	3·17	1·82	29·99
	CHANNEL ISLANDS.													
Jersey.....	St. Aubins (Belle Vue).....	2·95	3·98	1·54	1·45	2·51	1·91	2·61	2·08	2·72	3·05	2·26	2·05	29·11
Guernsey	St. Martin's (Les Blanches).....	2·83	3·47	2·23	1·19	1·45	1·89	1·78	1·39	3·73	2·81	3·25	2 30	28·32
Sark	Pointe Robert	2·49	2·99	1·85	1·44	1·59	1·13	2·11	1·54	3·15	1·74	1·51	1·41	22·95
Alderney	St. Anne (Grosnez House)..... ...	2·65	3·81	2·70	1·02	1·20	1·08	1·69	1·70	3·41	2·48	2·19	1·11	25·04
	SCOTLAND.													
Wigtownshire .. 3	Whithorn (Glasserton)	4·15	3·65	2·54	1·44	2·12	2·52	3·85	2·09	·64	2·58	2·31	1·71	29·60
,, .. 3	Port William (Monreith).....	3·65	3·96	1·92	1·48	2·01	2·50	3·02	1·93	·62	2·55	2·49	1·87	28·00
,, .. 4	Kirkcowan (Craighlaw).....	3·94	3·90	3·52	2·06	2·71	3·26	3·12	3·07	·73	3·72	3·40	2·86	36·29
Kirkcudbrightsh'e 3	Dalry (Glendarroch)	5·43	5·75	3·78	2·28	4·24	2·61	5·60	2·35	·89	3·69	2·55	2·02	41·19
,, 4	Dalbeattie (Drumstinchall).....	6·11	3·75	2·71	1·94	3·17	3·25	4·80	2·42	1·47	2·69	2·47	1·51	36·29
Dumfriesshire .. 3	Moniaive (Glencrosh)	7·23	5·36	4·02	2·73	3·69	3·11	6·54	2·43	1·22	3·64	2·49	1·86	44·32
,, .. 4	Dalton (Kirkwood).....	5·01	3·54	1·90	2·42	3·16	3·12	5·66	2·38	·95	3·19	2·12	1·35	34·80
,, .. 5	Langholm (Ewes, Sandyhaugh)....	6·50	4·45	3·05	2·90	2·81	2·40	6·69	3·62	·66	3·54	1·82	1·10	39·54
,, .. 5	Eskdalemuir (Observatory).....	8·94	5·76	3·67	3·04	2·52	2·21	6·84	2·86	1·04	3·70	2·07	1·45	44·10
Roxburghshire.. 3	Jedburgh (Jedneuk)	1·74	3·12	·47	·91	1·58	1·77	4·34	2·32	1·23	3·05	1·91	·60	23·04
Selkirkshire 1	Selkirk (Whitmuir Hall)	3·60	2·91	1·20	1·56	1·71	1·52	3·50	·97	1·35	3·52	1·77	·76	24·37
Peeblesshire.... 1	Edin. W.W. (Victoria Lodge).....	7·35	5·10	3·23	2·04	2·09	1·87	4·56	2·18	1·43	4·87	2·97	·84	38·53
,, ... 2	Stobo Castle.....	4·98	3·86	2·16	2·43	1·88	1·95	4·94	2·76	1·23	3·71	1·99	·49	32·38
Berwickshire ... 2	Earnscleugh Burn (Blythe Rig)....	2·33	3·00	1·63	2·46	1·59	1·68	3·69	1·69	2·13	5·23	4·15	2·07	31·65
,, ... 4	Marchmont House.....	1·32	2·90	1·01	1·62	·89	1·09	3·85	1·48	1·34	3·63	2·50	1·26	22·89
East Lothian .. 5	North Berwick Reservoir.....	1·24	1·63	·89	2·10	1·09	1·54	2·47	·80	1·21	2·38	1·44	1·42	18·21
Midlothianshire. 5	Pentland Hills (Harperrig).....	4·46	3·56	1·78	2·49	2·27	2·48	4·31	1·82	2·28	2·97	1·94	1·12	31·48

Table XX.—(*con.*) *Monthly Rainfall*—**SCOTLAND**—(*con.*).

County and River Division.	Station.	Jan.	Feb.	Mar.	Apl.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
		in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
Midlothianshire. 5	Edinburgh (Blackford Hill)	2·59	1·15	·88	1·75	1·66	1·88	4·78	·84	1·87	2·25	1·44	·79	21·88
Lanarkshire.... 4	Gartcosh (Gartloch Hospital).....	3·42	3·09	2·18	1·94	2·11	1·60	4·26	2·95	1·00	2·41	1·75	·65	27·36
,, ... 5	Douglas (Kilncroft).....	5·53	5·49	3·95	2·29	3·10	1·12	3·38	2·62	1·34	4·35	1·41	·76	35·34
,, ... 5	Strathaven (East Overton Ho.)....	5·05	3·90	3·08	2·17	2·85	2·16	4·88	3·25	1·16	3·72	1·81	·97	35·00
Ayrshire..... 3	Dalry W. W. (Filters)	4·67	3·57	2·46	3·15	3·25	3·37	5·20	5·15	1·02	4·39	3·23	2·12	41·58
,, ... 6	Maybole (Culzean Castle Gardens)..	3·53	3·39	3·59	1·87	2·72	1·53	3·02	3·82	·71	2·56	1·53	1·71	29·98
,, ... 8	Colmonell (Knockdolian).....	3·06	3·18	3·12	1·51	2·01	2·93	3·22	4·16	1·51	3·29	2·47	2·43	32·89
,, ...13	Glen Afton (Ayr Sanatorium).....	7·96	6·10	4·01	2·53	4·21	2·66	5·54	2·79	1·19	3·93	2·69	1·31	44·92
Renfrewshire... 2	Houston Manse	6·40	4·42	3·62	2·58	2·98	2·46	3·39	3·02	·83	3·07	2·97	1·11	36·85
Dumbartonshire 2	Cardross (Kilmahew).....	6·15	4·07	2·42	2·42	3·09	2·18	4·11	2·80	·75	3·29	2·93	1·14	35·35
Stirlingshire.... 1	Falkirk (Westbank Garden).....	3·79	2·85	1·90	1·40	2·18	·99	4·15	1·77	1·06	2·65	2·04	·82	25·60
Buteshire..... 1	Port Bannatyne (Ettrickdale).....	4·82	5·35	3·93	3·81	4·12	3·00	4·55	4·95	·86	3·82	4·15	2·91	46·27
,, ... 3	Arran (Dougarie Lodge).....	4·22	6·53	2·41	2·02	2·12	2·62	3·94	4·07	1·49	3·65	2·80	2·63	38·50
Argyllshire..... 2	Loch Sunart (Glenborrodale).....	7·24	4·79	3·23	6·18	2·58	3·79	6·16	8·68	1·97	9·17	4·60	2·90	61·29
,, ... 2	Acharacle (Shielbridge).....	7·47	4·93	3·09	4·47	2·37	4·17	5·37	7·53	1·61	7·99	4·67	3·19	56·86
,, ... 3	Morvern (Kingairloch).....	11·75	7·63	6·13	8·07	3·73	5·26	7·51	13·29	2·57	9·77	4·25	5·92	85·88
,, ... 5	Glen Etive	13·97	10·56	7·32	10·75	4·26	3·89	5·71	8·26	2·49	8·53	5·01	3·06	83·81
,, ... 6	Bridge of Orchy (Inveroran).....	14·53	8·51	5·61	7·72	2·95	2·85	4·09	5·04	2·11	5·23	3·80	1·95	64·39
,, ... 7	Oban	6·57	5·53	3·09	3·84	2·45	3·60	5·98	5·23	1·07	3·48	2·51	2·55	45·90
,, ...10	Campbeltown (South Park).....	3·88	4·33	3·44	2·73	2·42	2·38	3·46	3·81	1·27	5·85	4·08	4·42	42·07
,, ...10	Skipness (Claonaig).....	4·91	4·45	2·42	3·02	3·17	4·08	3·26	4·43	1·45	4·13	2·82	1·86	40·00
,, ...11	Ardrishaig (Canal Office).....	6·88	6·23	3·57	4·43	4·30	4·90	5·46	5·67	2·05	6·28	3·30	3·15	56·22
,, ...11	Ardkinglas	9·30	8·25	5·98	5·07	3·76	4·17	5·62	5·85	1·27	6·10	4·80	2·51	62·68
,, ...12	Loch Eck (Benmore).....	10·05	8·16	5·62	6·94	5·82	5·08	6·04	8·48	1·21	5·94	5·55	2·34	71·23
,, ...14	Islay (Eallabus) *old g.*	4·21	6·14	2·98	2·24	3·03	1·84	3·34	4·43	1·09	3·90	3·13	3·43	39·76
,, ...14	Jura (Ardfin)	4·27	5·20	2·62	3·14	3·64	2·78	4·13	4·89	·98	5·16	3·51	3·15	43·47
,, ...14	Mull (Bunessan).....	4·42	5·20	2·67	2·91	3·03	2·97	4·82	7·08	1·68	5·03	3·63	4·22	47·66
,, ...14	Mull (Benmore).....	9·80	(12·60)	(10·00)	8·50	3·60	2·90	13·50	17·00	3·03	13·30	(8·60)	(12·00)	114·83
,, ...14	Mull (Glencannel)	10·96	8·80	6·64	9·77	4·16	6·09	7·55	10·42	2·59	10·79	6·31	7·92	92·00
,, ...14	Tiree.....	4·24	3·56	2·62	3·18	2·39	2·11	4·46	6·07	1·37	5·93	3·61	2·54	42·08
Fifeshire..... 2	Kirkcaldy (Munro Street).....	2·65	2·17	1·18	1·74	1·62	1·81	4·69	·96	1·85	2·33	1·40	·70	23·10
,, ... 3	Cupar (Asylum)	2·59	1·99	·79	·96	1·39	1·47	2·77	·82	2·10	3·14	2·13	·98	21·13

Table XX.—(*con.*) *Monthly Rainfall*—**SCOTLAND**—(*con.*).

County and River Division.		Station.	Jan.	Feb.	Mar.	Apl.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
			in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
Perthshire	3	Loch Drunkie	8·60	5·70	4·40	3·50	3·00	1·80	4·45	4·60	1·35	4·35	3·20	1·80	46·75
,,	3	Glengyle	11·70	7·95	7·05	5·00	3·95	3·35	6·00	7·05	2·35	6·80	4·75	2·70	68·65
,,	4	Glendevon (Tormaukin)	6·46	3·06	3·38	1·98	2·04	2·08	5·05	3·10	1·88	4·09	2·67	1·49	37·28
,,	7	Lochearnhead (Edinchip)	9·32	5·93	4·85	3·29	2·97	1·86	4·05	3·79	2·52	6·32	4·55	1·68	51·13
,,	7	Crieff (Strathearn Hydro)	4·53	3·52	1·78	1·52	2·02	1·52	3·28	1·23	1·72	3·66	2·90	·91	28·59
,,	11	Aberfeldy (Dall Avon)	4·78	5·33	2·01	1·33	1·99	1·80	3·13	1·00	1·80	3·44	3·66	·52	30·79
,,	14	Loch Rannoch (Dall)	8·16	4·82	2·78	2·56	1·50	1·93	3·68	2·07	1·55	4·17	2·70	·87	36·79
,,	14	Blair Atholl (Blair Castle Gdns.)	4·46	4·31	1·41	1·55	1·52	·73	2·70	1·51	1·89	3·78	3·29	·73	27·88
,,	15	Kirkmichael (Ballintuim Ho.)	4·01	4·05	2·21	1·76	1·34	1·33	2·97	1·06	2·86	4·04	4·25	1·53	31·41
Angus	1	Kettins School	2·08	4·00	1·50	·84	1·35	1·34	2·63	·85	2·11	3·41	3·00	1·22	24·33
,,	3	Arbroath (W. Cemetery)	1·55	1·82	1·27	1·07	·99	1·12	1·87	·72	1·70	2·65	1·96	1·30	18·02
,,	3	Glen Prosen (Pearsie House)	3·31	4·00	2·48	2·06	1·47	1·65	3·13	1·41	2·13	4·35	4·03	1·92	31·94
Kincardineshire	1	Marykirk (Balmakewan)	2·43	2·71	2·06	1·39	1·19	1·23	2·47	·89	2·06	3·32	3·13	2·01	24·89
,,	3	Strachan (Bridge of Dye)	3·68	4·78	3·30	1·61	·69	1·08	3·54	1·17	2·99	7·19	5·45	3·28	38·76
Aberdeenshire	1	Braemar (Bank)	4·51	3·34	1·57	1·67	1·47	1·54	2·69	1·09	2·29	6·46	3·85	1·14	31·62
,,	1	Ballater (Irrigation Farm)	2·28	3·61	1·67	1·17	1·06	1·00	3·13	·67	2·23	7·92	4·56	1·55	30·85
,,	1	Logie Coldstone School	1·63	3·25	1·54	1·77	·67	1·28	2·65	·75	1·73	6·12	3·63	1·24	26·26
,,	2	Aberdeen (Observatory)	1·82	3·71	2·00	2·06	·97	·86	3·08	1·22	·90	4·72	3·24	1·91	26·49
,,	2	Dyce (Craibstone)	1·79	3·38	2·85	1·72	1·17	·94	3·72	1·00	1·26	5·59	4·21	2·57	30·20
,,	3	Haddo House	1·44	4·28	2·59	2·42	·73	1·34	3·46	·77	·87	5·32	4·17	2·43	29·82
,,	4	Peterhead (Forehill Works)	2·25	2·88	1·40	1·32	1·06	1·41	3·31	1·19	1·34	5·37	3·07	2·27	26·87
,,	5	Huntly (Cruchie)	·97	5·02	1·51	2·47	·81	1·95	4·86	1·55	1·11	6·21	3·87	1·33	31·66
Banffshire	2	Turriff (Forglen Gardens)	1·39	4·78	1·84	1·49	·72	1·88	4·28	1·24	1·65	5·55	4·39	1·55	30·76
Morayshire	2	Fochabers (Gordon Castle Gdns.)	·99	3·48	·68	1·55	·66	1·80	3·11	1·56	2·04	6·38	1·69	·45	24·39
,,	3	Grantown-on-Spey	1·64	3·02	·98	2·44	1·38	1·55	2·92	2·06	·99	5·46	1·86	·26	24·56
,,	3	Aberlour (Wester Elchies)	·64	3·44	·66	2·07	1·22	2·31	3·64	1·36	2·02	8·23	2·36	·44	28·39
Nairnshire	2	Nairn (Achareidh)	1·33	2·21	·68	2·09	1·84	1·93	2·20	1·96	·78	3·32	·97	·37	19·68
Inverness-shire	3	Cluny Castle	4·65	2·21	1·40	3·29	1·26	1·11	2·54	2·59	1·16	5·54	1·90	·55	28·20
,,	3	Alvie Manse	3·15	2·36	·69	(2·10)	(1·70)	·84	2·20	1·09	1·14	5·13	1·54	·25	22·19
,,	6	Loch Ness (Foyers)	5·20	2·35	·92	2·15	1·12	1·78	2·43	2·58	·91	6·02	1·41	·50	27·37
,,	7	Loch Quoich (Glenquoich)	15·48	9·00	4·73	9·69	1·72	3·28	4·64	10·61	1·67	9·99	3·50	2·76	77·07

Table XX.—(*con*). *Monthly Rainfall*—**SCOTLAND**—(*con.*).

County and River Division.	Station.	Jan.	Feb.	Mar.	Apl.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
		in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
Inverness-shire .12	Loch Nevis (Inverie Gdns.)	7·90	8·45	3·72	8·10	2·65	3·93	5·62	8·32	1·36	8·08	4·55	2·11	64·79
,, ..13	Arisaig House	5·30	5·86	2·82	5·22	2·00	3·58	6·01	6·57	1·60	6·97	4·35	2·88	53·16
,, ..17	Glenleven (Corrour)	9·20	5·22	4·40	4·37	2·67	3·28	3·85	5·70	1·44	5·73	2·83	1·28	49·97
,, ..17	Fort William (Glasdrum)	11·41	5·46	4·76	5·25	2·40	3·62	4·15	6·16	1·82	9·59	3·42	2·03	60·07
,, ..18	Hyskier	5·01	5·12	3·81	2·79	1·31	1·25	4·41	4·65	1·24	3·16	3·07	3·65	39·47
,, ..18	Skye (Kyleakin, Dunringell)	10·75	4·96	3·56	4·65	1·96	3·62	3·57	7·40	1·49	7·40	2·66	2·37	54·39
,, ..18	Skye (Portree)	9·40	5·33	3·73	5·00	1·47	3·56	4·12	10·02	1·14	8·19	3·84	3·44	59·24
,, ..18	Skye (Dunvegan)	7·61	4·08	2·79	4·84	1·16	3·84	2·46	7·55	1·12	5·17	2·93	3·67	47·22
,, ..19	Barra (Skallary)	5·09	3·32	3·06	2·59	1·54	3·23	3·85	6·16	1·43	5·09	2·35	2·72	40·43
,, ..19	N. Harris (Amhuinnsuidh Castle)	6·23	4·48	2·98	5·06	1·51	2·96	3·96	6·96	1·89	5·90	3·37	2·95	48·25
Ross & Cromarty 1	Glenmoriston (Cluanie Inn)	13·84	8·55	4·84	10·09	3·48	3·77	6·24	10·08	1·83	12·43	4·86	1·95	81·96
,, 4	Strathpeffer Spa	1·90	2·07	·79	2·39	1·76	1·78	3·39	1·99	·63	4·24	1·59	·44	22·97
,, 4	Alness (Ardross Castle)	3·18	3·51	1·52	2·60	1·12	2·63	2·73	1·53	·53	5·34	3·30	·41	28·40
,, 7	Braemore (Loch a' Bhraoin)	10·10	7·50	4·80	7·60	2·00	2·00	6·80	7·30	1·50	8·40	5·50	4·60	68·10
,, 7	Ullapool	6·48	5·01	1·36	4·35	·89	3·54	2·59	5·53	·50	4·90	3·56	·69	39·40
,, 8	Poolewe (Inverewe Gardens)	7·24	6·59	1·40	5·60	·71	2·69	2·74	5·59	·78	6·66	3·91	1·97	45·88
,, 9	Loch Carron (Dunhulladale)	7·62	7·86	2·32	12·42	2·16	3·83	5·18	8·70	1·60	6·97	4·47	2·05	65·18
,, 9	Achnashellach	9·94	7·71	3·22	10·43	1·46	4·30	5·28	6·56	1·07	7·93	4·89	1·65	64·44
,, 10	Stornoway (Coastguard Stn.)	5·67	3·43	2·18	2·85	·92	2·05	2·49	6·08	·90	4·80	1·78	1·59	34·74
Sutherlandshire 1	Skibo Castle Gardens	1·41	3·26	1·16	1·84	1·14	1·97	3·01	1·97	·26	3·48	1·60	·54	21·64
,, 1	Lairg	2·19	4·73	1·31	2·52	1·33	2·03	1·52	2·52	·14	4·59	2·41	·83	26·12
,, 4	Skerray (Borgie)	3·28	6·14	1·66	2·17	1·87	1·45	2·65	4·92	1·08	5·03	3·60	1·00	34·85
,, 4	Tongue	3·11	5·58	1·83	1·97	1·40	1·93	2·70	4·76	·92	5·23	3·00	·84	33·27
,, 4	Melvich	2·07	4·79	1·60	1·59	·98	1·70	4·39	3·99	·60	3·87	2·95	·97	29·50
,, 5	Loch More (Achfary)	8·23	7·58	2·86	7·06	1·38	3·99	5·09	11·04	1·55	9·88	6·28	2·35	67·29
Caithness-shire 2	Wick (Coastguard Station)	1·76	3·46	1·87	1·35	·72	1·46	2·21	2·57	1·17	3·89	2·94	1·09	24·49
,, 3	Thurso (Buckies)	1·59	4·90	2·66	1·71	·90	1·37	2·41	3·81	·99	3·53	4·19	1·16	29·22
Orkney	Kirkwall (Bignold Park)	2·93	4·28	2·70	2·56	·86	1·05	1·80	2·58	·98	2·53	3·03	2·43	27·73
Shetland	Lerwick (Observatory)	5·35	3·03	3·33	2·53	·81	1·16	1·69	3·39	2·38	4·87	3·54	2·50	34·58

Table XX.—(*con.*) *Monthly Rainfall*—IRELAND.

County and River Division.	Station.	Jan.	Feb.	Mar.	Apl.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
		in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
Co. Cork..... 4	Garinish Island	5·31	2·76	6·47	3·37	4·48	1·30	5·70	3·16	1·66	2·27	3·23	3·02	42·73
,, ... 6	Castletownshend (Seafield).....	5·03	2·39	3·74	2·74	3·69	·73	3·19	1·72	1·58	2·21	2·59	1·74	31·35
,, ... 6	Dunmanway (The Rectory).....	6·32	2·95	4·69	3·24	5·44	1·23	3·84	2·30	1·54	2·94	2·99	2·72	40·20
,, ... 7	Cork (University College).....	3·58	2·25	2·78	2·58	4·57	1·59	2·00	1·64	1·59	2·09	2·72	1·66	29·05
,, ... 9	Mallow (Longueville)	2·70	2·13	2·48	2·04	5·07	2·01	2·24	1·75	1·10	2·31	2·04	1·54	27·41
,, ... 9	Kanturk (Castlecor)	2·50	2·94	1·89	2·30	4·62	2·05	3·65	1·76	·99	2·45	1·94	1·60	28·69
Co. Kerry..... 3	Valentia (Observatory).....	5·55	2·20	6·57	2·92	4·57	2·93	3·94	4·17	2·47	3·19	2·60	4·04	45·15
,, ... 3	Killarney (Flesk Mills)	6·41	2·25	4·69	2·24	4·03	3·02	2·98	2·76	2·08	3·36	2·39	2·37	38·58
,, ... 3	Killorglin (Callinafercy)	4·75	2·22	4·66	1·61	2·63	3·00	3·46	3·25	1·42	4·01	2·78	2·08	35·87
,, ... 3	Bally McElligott Rectory.....	3·83	1·68	3·55	1·45	3·20	2·70	3·17	3·10	1·58	2·27	2·67	2·56	31·76
,, ... 4	Darrynane Abbey	3·94	2·99	5·06	2·58	3·23	1·93	4·17	2·09	2·05	3·35	3·59	2·49	37·47
,, ... 4	Kenmare (Dromore Castle)	6·19	3·72	5·56	2·92	5·80	2·06	5·59	3·10	1·88	3·36	3·52	3·17	46·87
Co. Waterford .. 3	Waterford (Gortmore).....	3·71	3·83	3·62	1·85	3·62	2·26	2·18	1·02	2·24	3·96	1·55	2·33	32·17
,, .. 3	Carrick-on-Suir (Seskin).....	3·29	3·80	3·04	2·28	4·81	3·12	2·13	2·42	1·95	4·05	1·57	2·12	34·58
Co. Tipperary .. 1	Nenagh (Traverston).....	4·08	4·41	4·06	2·28	3·29	3·22	3·76	2·24	1·73	2·75	1·51	2·30	35·63
,, .. 1	Nenagh (Castle Lough).....	4·51	3·52	3·68	1·31	3·85	2·66	2·62	1·71	1·67	2·21	1·12	1·84	30·70
,, .. 3	Cahir (Abbey)	2·90	3·07	2·26	1·32	5·01	2·26	2·13	1·57	1·73	2·53	·82	1·80	27·40
,, .. 3	Cashel (Ballinamona)	2·30	3·43	1·94	1·41	4·24	2·19	2·60	2·15	2·21	2·12	·81	1·94	27·34
,, .. 4	Roscrea (Timoney Park)	2·19	(3·42)	2·30	(1·22)	2·89	3·72	(3·25)	1·94	2·36	2·15	1·21	1·33	(27·98)
Co. Limerick ... 2	Abbeyfeale (Springmount School)..	4·01	2·52	2·24	(1·36)	3·41	2·50	2·36	2·75	(1·20)	(1·93)	2·05	2·16	(28·49)
,, .. 2	Knocklong (Kilfrush)	2·10	2·44	2·35	1·19	5·20	2·93	2·82	1·56	1·37	1·90	1·05	2·12	27·03
,, .. 2	Foynes (Coolnanes).....	3·89	1·88	2·75	1·23	4·15	1·72	2·89	1·79	·83	2·18	1·31	1·45	26·07
,, .. 2	Limerick (Mulgrave Street)	2·20	2·14	3·29	1·31	5·51	2·40	3·52	1·99	2·00	2·11	1·22	1·96	29·65
Co. Clare 2	Kilkee (Marine Parade)	4·89	1·73	3·57	1·26	3·07	2·35	3·48	2·53	1·53	2·48	2·40	1·89	31·18
,, ... 2	Inagh (Mount Callan)	6·48	3·90	4·15	2·35	6·03	2·96	5·78	4·05	1·50	3·49	2·30	2·80	45·79
,, ... 3	Tuamgraney (Raheen Ho.)	4·70	2·87	4·24	2·02	4·46	2·33	3·54	2·04	1·77	2·72	1·07	2·65	34·41
Co. Wexford ... 2	Foulks Mill (Longraigue)	3·49	4·12	3·80	1·76	3·42	2·76	2·40	1·10	1·83	5·86	1·90	2·46	34·90
,, ... 3	Johnstown Castle	3·56	3·43	3·72	1·45	2·69	2·71	2·44	1·66	1·64	5·21	1·34	2·77	32·62
,, ... 3	Enniscorthy (Woodbrook).....	4·12	5·88	4·53	2·02	4·57	4·95	5·52	2·55	1·89	6·53	1·61	3·75	47·92
,, ... 4	Gorey (Courtown House)	2·90	5·09	3·02	1·47	2·95	2·93	2·30	1·01	1·37	3·93	·79	2·51	30·27
Co. Kilkenny... 2	Castlecomer House	2·56	3·47	2·73	1·48	2·46	2·47	1·94	2·45	1·73	3·38	2·10	2·27	29·04

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County and River Division.		Station.	Jan.	Feb.	Mar.	Apl.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
			in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
Co. Wicklow ...	4	Newcastle (Killadreenan)	2·29	3·94	2·77	1·47	3·70	1·99	1·77	·75	2·18	3·93	1·36	3·06	29·21
,, ...	5	Blessington Rectory	3·13	(4·47)	2·57	1·23	1·50	2·83	2·74	1·32	1·56	3·73	2·29	1·61	(28·98)
Co. Carlow	2	Bagnalstown (Fenagh House)	2·28	3·42	2·70	·82	1·82	2·45	2·53	1·17	2·37	3·82	1·60	1·93	26·91
,, ...	3	Hacketstown Rectory	2·44	3·92	2·84	1·41	3·39	3·77	2·97	1·04	1·80	4·84	1·84	2·50	32·76
Co. Leix	2	Abbey Leix (Blandsfort)	2·59	4·15	3·03	1·02	2·21	2·93	2·64	1·95	2·10	2·70	2·10	2·56	29·98
,, ...	3	Mountmellick (Summer Grove)	3·49	5·26	3·80	1·41	2·64	2·61	2·91	2·29	2·25	2·93	1·79	2·15	33·53
Co. Offaly	1	Birr Castle	2·86	2·32	3·32	·99	2·02	2·51	3·12	2·33	1·40	2·11	1·15	1·93	26·06
,, ..	1	Ferbane (Turraun Peat Works)	2·52	2·04	2·95	1·03	1·84	2·79	2·28	1·75	1·84	2·19	1·02	1·48	23·73
Co. Kildare	2	Straffan House	2·49	(4·29)	2·08	1·19	(1·53)	1·80	2·00	1·91	1·41	3·45	1·79	1·03	(24·97)
Co. Dublin	2	Howth Castle	1·64	2·26	2·67	·76	1·92	1·81	1·69	1·01	1·12	2·09	·98	1·47	19·42
,, ...	3	Balbriggan (Ardgillan)	1·68	2·52	2·04	1·14	1·96	1·58	1·79	1·02	1·22	3·12	1·35	1·98	21·40
Co. Meath	2	Dunboyne (Stirling, Clonee)	2·04	3·77	1·87	1·34	1·80	1·86	2·43	1·40	1·09	2·97	1·58	1·71	23·86
,, ...	4	Summerhill House	2·77	(3·72)	1·98	·96	2·03	1·94	3·02	1·63	·93	2·92	1·65	1·74	(25·29)
,, ...	4	Kells (Headfort)	3·24	3·68	2·10	1·93	1·87	2·97	2·26	1·34	·61	2·70	2·10	1·84	26·64
Co. Westmeath .	1	Mullingar (Belvedere House)	3·09	3·34	2·65	1·50	2·13	2·77	2·76	1·93	·82	2·75	1·28	2·63	27·65
,, ..	1	Mullingar (Ballynegall Gdns.)	3·31	2·93	2·73	1·76	2·44	3·36	2·19	1·87	·88	2·81	1·54	2·40	28·22
,, ..	1	Castlepollard (Pakenham Hall)	3·30	3·25	2·93	1·46	2·00	2·73	2·72	2·57	·71	2·44	1·91	2·21	28·23
Co. Louth	2	Dundalk (Ravensdale)	2·44	3·41	2·74	2·29	3·38	3·42	2·64	2·06	·62	3·21	2·02	3·20	31·43
Co. Longford ...	2	Ballymahon (New Castle)	3·92	3·18	3·10	1·35	1·97	3·03	2·80	2·46	1·10	3·00	1·65	2·49	30·05
,, ...	2	Newtownforbes (Cas. Forbes Gdns.)	3·93	3·30	3·46	1·48	2·30	3·11	3·99	2·10	·81	2·26	1·27	2·22	30·23
Co. Galway	3	Galway (Grammar School)	(4·40)	(2·12)	2·45	(1·80)	3·35	1·50	(2·50)	(2·50)	1·31	1·85	1·58	1·75	(27·11)
,, ...	3	Ballynahinch Castle	6·19	3·60	6·43	2·84	4·44	3·78	5·34	6·61	2·52	3·76	3·04	3·26	51·81
,, ...	3	Tuam Palace Gardens	4·66	2·63	3·95	2·36	3·12	2·60	3·54	2·42	1·08	(2·75)	(1·44)	2·11	32·66
,, ...	5	Portumna	3·48	2·54	2·91	1·24	2·07	2·38	2·36	1·55	1·76	1·74	1·17	1·80	25·00
,, ...	5	Ahascragh (Clonbrock)	5·14	2·82	4·76	1·47	2·67	2·47	2·80	2·24	1·48	3·16	1·95	1·79	32·75
Co. Roscommon	4	Strokestown (Castlenode)	4·01	2·91	3·10	2·22	2·60	2·75	2·88	1·79	·85	2·25	1·51	2·05	28·92
Co. Mayo	2	Castlebar Rectory	5·47	3·06	4·67	2·28	3·76	3·31	3·86	2·93	2·15	4·57	2·27	2·48	40·81
,, ...	2	Ballina (The Rectory)	6·47	3·34	4·43	2·16	4·06	4·68	10·20	3·34	2·40	4·67	2·80	2·28	50·83
,, ...	3	Blacksod Point	6·36	2·91	4·96	2·18	2·83	3·68	3·97	5·94	2·62	4·50	3·03	3·21	46·19
,, ...	4	Mallaranny	7·78	4·65	4·44	3·71	3·79	4·36	4·36	6·33	2·52	5·07	3·41	3·32	53·74
,, ...	5	Aasleagh House	12·96	5·95	9·77	4·90	5·68	4·96	7·14	10·61	2·50	8·31	4·81	5·77	83·36
,, ...	5	Delphi Lodge	11·63	5·65	8·37	4·63	4·78	6·69	7·77	11·07	3·18	9·98	4·54	5·07	83·36

Table XX.—(*con.*) *Monthly Rainfall*—**IRELAND**—(*con.*).

County and River Division.		Station.	Jan.	Feb.	Mar.	Apl.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
			in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
Co. Sligo.....	2	Collooney (Markree Castle).....	4·14	3·14	3·98	2·29	2·80	4·05	2·97	3·05	·85	3·35	2·53	1·83	34·98
,, ...	2	Sligo (Ard-na-veagh)	3·49	2·76	3·77	2·46	2·80	3·97	5·24	3·27	·83	3·90	2·41	1·95	36·85
Co. Leitrim	5	Cloone.....	4·36	2·73	2·64	2·23	2·27	2·65	3·42	2·30	·47	2·52	2·40	2·14	30·13
Co. Cavan	1	Crossdoney (Kevit Castle).....	3·17	2·58	2·42	1·61	1·83	2·59	2·77	1·88	·45	1·99	1·64	2·34	25·27
Co. Fermanagh .	1	Newtownbutler (Crom Castle)	3·78	3·01	3·06	1·70	2·42	4·05	2·73	1·61	·49	2·47	1·46	1·79	28·57
,, ..	1	Enniskillen (Portora School).....	3·12	3·01	2·09	1·24	2·75	2·52	(3·92)	(2·38)	·34	2·47	1·03	1·95	26·82
,, ..	1	Belleek (Heronshaw).....	4·62	3·75	3·39	2·18	2·88	5·01	5·08	3·68	·64	4·13	1·47	1·72	38·55
Co. Armagh....	3	Lurgan (Belle Vue).....	1·78	2·89	2·08	·81	2·05	1·74	2·27	1·79	·93	1·85	1·10	1·59	20·88
,, ...	5	Armagh (Observatory)	2·13	2·86	2·02	·85	2·57	2·14	2·76	1·53	·15	2·00	·94	1·64	21·59
Co. Down.....	1	Newry (Bridge Street House).....	2·80	3·63	2·86	1·93	2·15	3·96	3·09	1·73	·60	2·81	1·01	2·81	29·38
,, ...	2	Silent Valley (Belfast W.W.)	3·47	4·34	4·72	2·79	3·36	2·70	3·47	3·82	1·32	4·60	1·66	4·50	40·75
,, ...	2	Seaforde	2·51	3·22	2·90	2·48	2·81	2·85	3·36	2·16	·73	3·74	1·57	2·03	30·36
,, ...	4	Donaghadee(Coastguard Station)..	2·01	3·54	2·79	1·67	2·43	1·78	2·15	2·25	·76	2·15	3·11	2·48	27·12
Co. Antrim.....	1	Belfast (Queen's University).....	2·28	3·79	2·45	1·16	2·38	3·01	2·77	2·33	·73	2·38	1·40	1·96	26·64
,, ...	2	Larne (Sallagh Springs).....	2·85	4·01	3·21	2·25	2·90	2·68	4·34	3·14	1·39	4·15	2·06	2·68	35·66
,, ...	3	Ballycastle (Magherintemple)	2·56	4·35	2·19	1·32	1·24	2·18	2·41	2·96	·71	4·37	2·64	2·92	29·85
,, ...	5	Aldergrove (Aerodome)	1·77	3·04	1·78	1·30	1·63	2·66	2·54	2·79	·52	2·34	1·60	1·61	23·58
,, ...	5	Ballymena (Harryville)	2·58	3·54	2·64	1·80	2·46	2·85	2·53	2·78	·61	4·29	2·48	2·62	31·18
Co. Londonderry	1	Londonderry (Dunruadh).....	3·88	3·26	2·85	1·37	2·40	2·48	3·74	3·07	·61	4·26	1·84	2·17	31·93
,, ...	5	Glenedra Lodge	5·51	5·60	5·02	2·95	4·46	3·51	4·55	3·42	1·30	5·70	2·31	3·46	47·79
,, ...	5	Bellarena	2·97	3·34	2·00	1·35	2·93	2·21	2·54	2·41	·57	3·51	2·02	2·39	28·24
Co. Tyrone.....	2	Castlecaulfield (Parkanaur).....	1·88	2·74	2·88	2·40	2·61	2·70	4·21	2·67	·49	3·23	1·50	2·73	30·04
,, ...	3	Omagh (Edenfel).....	3·80	3·37	2·88	1·97	1·93	2·43	2·62	2·39	·46	3·03	1·40	2·38	28·66
,, ...	3	Sion Mills (Sion House).....	4·28	3·06	3·01	1·76	1·89	1·99	2·38	2·04	·88	3·76	1·66	1·89	28·60
Co. Donegal....	1	Malin Head (C.Guard Stn.) *New Site*	3·81	3·96	2·31	1·55	1·94	1·83	4·33	3·75	·54	3·77	2·11	1·83	31·73
,, ...	3	Milford (The Manse).....	4·01	2·68	3·29	1·53	1·99	2·70	3·25	2·49	·73	5·34	2·38	2·29	32·68
,, ...	3	Dunfanaghy (St. Patrick's).....	5·15	3·10	2·75	1·75	2·23	1·77	3·88	3·41	·56	4·52	1·59	1·86	32·57

Table XXI.—*Monthly Rainfall in* 1933; *the Average,* 1881–1915, *being taken as* 100.

County and River Division.	Station.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year.
		%	%	%	%	%	%	%	%	%	%	%	%	%
London..... 2	St. Pancras (Camden Square).....	72	87	124	54	96	92	39	26	165	60	37	15	69
Kent..... 1	Tenterden (Ashenden).....	100	101	107	73	111	67	70	38	202	44	49	18	76
,, ... 2	Margate (Cliftonville)	80	57	64	57	75	81	59	35	260	59	87	18	77
,, ... 4	Edenbridge (Falconhurst)	90	121	150	36	156	74	102	45	155	56	28	19	80
Sussex..... 1	Compton (Compton House).....	88	176	145	73	145	84	105	38	103	49	24	22	80
,, ... 5	Eastbourne (Wilmington Square)..	89	86	88	57	74	127	68	47	184	67	35	38	76
Hampshire..... 1	Ventnor (Royal National Hosp.)...	101	170	136	106	141	57	69	55	179	67	31	30	89
,, ... 3	Fordingbridge (Oaklands)	92	179	179	92	98	98	89	25	123	44	29	26	81
,, ... 8	Sherborne St. John.....	105	203	136	65	104	125	65	15	201	51	16	14	84
Hertfordshire.... 3	Royston (Therfield Rectory).....	75	118	101	61	109	93	27	44	150	67	62	21	73
Buckinghamshire 3	Slough (Upton)	96	189	144	69	88	71	81	32	139	57	45	19	80
Oxfordshire..... 3	Oxford (Magdalen College).....	93	185	144	73	85	57	74	33	117	54	45	10	74
Northamptonshire 4	Pitsford (Sedgebrook).....	78	166	133	39	75	111	107	31	87	63	72	12	78
Cambridgeshire.. 2	March	89	100	133	77	102	138	53	34	131	81	89	17	83
Essex 4	Chelmsford (County Laboratory)..	78	77	95	59	99	57	44	17	110	62	53	25	61
Suffolk 3	Rendlesham Hall.....	49	108	101	98	101	68	32	59	182	71	156	34	86
,, ... 4	Lowestoft (Secondary School).....	53	115	87	65	99	135	41	46	170	128	149	29	93
,, ... 5	Bury St. Edmunds (Westley H.) ..	79	125	120	76	86	96	113	40	145	90	74	22	87
Norfolk..... 1	Sprowston (Oak Lodge)	47	131	105	76	87	105	46	34	121	90	92	31	78
,, ... 3	Wells (Holkham Hall)	74	129	118	78	113	68	45	30	88	133	96	36	83
Wiltshire 1	Calne (Castleway)	96	154	147	69	131	110	83	37	201	75	25	14	88
Dorsetshire 3	Weymouth (Westham House).....	81	186	152	95	102	21	98	25	104	50	22	29	74
South Devonshire 5	Teignmouth (Den Gardens)	84	165	156	89	85	114	92	48	142	60	31	70	90
,, 6	Cullompton	59	160	131	95	108	91	113	42	64	77	26	38	79
North Devonshire 2	Barnstaple (N. Dev. Athenæum)...	80	129	114	73	114	62	69	41	49	107	34	44	74
,, 3	Okehampton (Uplands).....	98	138	136	45	106	65	101	45	87	106	32	38	81
Cornwall..... 2	Penzance (Morrab Gardens).....	84	107	137	112	124	87	91	47	95	140	38	44	88
,, ... 2	St. Austell (Trevarna).....	75	112	126	95	145	118	98	54	84	134	44	65	92
Somersetshire ... 1	Litton (Sherborne Res.)	115	173	149	54	69	52	91	40	93	69	22	22	75
Gloucestershire .. 7	Cirencester (Gwynfa)	91	169	152	68	93	55	93	34	138	90	38	17	82
Shropshire..... 3	Church Stretton (Wolstaston).....	98	166	131	46	53	135	83	32	67	143	29	20	81
Staffordshire 2	Market Drayton (Old Springs).....	68	144	126	50	73	72	92	29	38	158	50	14	75

Table XXI.—*Monthly Rainfall in* 1933; *the Average,* 1881–1915, *being taken as* 100 (*con.*)

County and River Division.	Station.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year.
		%	%	%	%	%	%	%	%	%	%	%	%	%
Worcestershire .. 1	Malvern (Free Library).....	91	85	127	64	102	106	71	23	100	142	27	16	84
Warwickshire ... 1	Alcester (Ragley Hall)	100	165	119	62	67	84	73	25	77	133	42	20	77
,, .. 4	Birmingham (Edgbaston).....	95	230	153	42	107	97	91	28	40	180	39	18	91
Leicestershire ... 4	Grantham (Belvoir Castle Gdns.) ..	102	123	157	63	72	117	72	24	109	101	87	14	83
Lincolnshire..... 3	Boston (Black Sluice, Skirbeck) ...	91	112	146	90	89	118	51	17	113	116	114	31	87
,, ... 4	Louth (Westgate)	74	124	124	45	83	87	60	37	82	95	72	24	74
Nottinghamshire 5	Worksop (Hodsock)	95	211	154	46	112	108	52	13	94	164	98	15	93
Derbyshire..... 6	Derby (L.M. & S. Rly.).....	78	180	132	78	80	66	82	29	115	150	48	12	83
S. Lancashire.... 3	Manchester (Whitworth Park).....	80	160	123	51	83	140	86	32	45	139	43	14	80
C. ,, .. 1	Stonyhurst (College).....	86	144	73	63	62	82	90	63	26	117	42	15	70
C. ,, ... 3	Southport (Hesketh Park)	90	137	99	80	78	65	66	51	28	109	50	26	71
N. ,, ... 1	Ulverston (Poaka Beck).....	82	132	111	105	131	77	94	88	22	82	64	33	81
Yorkshire, W.R. . 8	Wakefield (Clarence Park)	98	251	118	93	124	46	90	16	100	143	96	21	96
,, E.R... 3	Hull (Pearson Park)	62	186	109	71	99	77	58	18	163	161	132	21	93
,, N.R... 1	West Witton (Ivy House)	104	189	75	66	150	110	105	19	95	82	99	20	90
,, ,,... 2	Felixkirk (Mount St. John)	99	335	96	86	126	77	90	16	82	149	166	41	108
,, ,, .. 3	York (Museum Gardens)	103	272	123	68	114	77	38	20	128	124	129	23	95
,, ,,... 5	Scarborough.....	66	197	102	60	79	66	35	15	79	148	85	36	79
,, ,,... 6	Middlesbrough (Albert Park).....	149	234	90	69	103	86	64	19	80	129	153	83	99
Northumberland. 3	Newcastle (Leazes Park)	73	213	82	52	83	96	69	42	97	131	148	92	97
,, . 4	Bellingham (Highgreen)	84	160	37	68	78	84	68	49	61	88	78	30	72
,, . 6	Ilderton (Lilburn Tower Gdns.)....	66	198	32	80	67	84	116	66	63	122	133	78	93
Cumberland..... 1	Carlisle (Scaleby).....	106	115	114	79	87	81	107	56	25	72	28	26	72
,, ... 2	Keswick (Derwent Island)	173	126	86	58	97	92	114	59	23	105	30	8	78
Westmorland.... 1	Appleby (Castle Bank)	134	85	67	66	156	85	74	64	60	152	60	29	85
Monmouthshire.. 3	Abergavenny (Larchfield).....	105	166	114	42	108	120	98	12	103	136	29	37	88
Glamorganshire.. 3	Ystalyfera (Wern House)	98	135	112	85	63	71	134	29	55	173	25	25	82
,, .. 5	Cardiff (Ely Pumping Station)	69	168	104	68	70	59	71	37	61	103	22	40	70
Carmarthenshire. 2	Carmarthen (The Friary)	106	106	91	80	80	67	97	43	58	145	18	25	75
Pembrokeshire .. 4	Haverfordwest (Grammar School)..	110	109	98	50	97	99	75	57	74	151	36	41	82
Radnorshire..... 1	Birmingham W.W. (Tyrmyndd)...	108	124	87	32	65	139	94	28	32	116	28	23	71
Montgomeryshire 4	Newtown (Penarth Weir)	83	140	79	28	90	171	77	34	55	136	37	26	78

Table XXI.—*Monthly Rainfall in* 1933; *the Average,* 1881–1915, *being taken as* 100 (*con.*)

County and River Division.	Station.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year.
		%	%	%	%	%	%	%	%	%	%	%	%	%
Montgomeryshire 5	Lake Vyrnwy	100	183	87	57	49	111	110	31	38	111	29	26	75
Flintshire 1	Sealand (Aerodrome)	67	149	109	58	59	62	50	39	24	115	57	20	65
Merionethshire 4	Dolgelley (Bontddu)	134	134	68	24	89	159	69	40	42	135	35	33	78
Carnarvonshire 2	Llandudno (Cricket Ground)	132	145	77	37	62	84	60	51	53	107	49	44	75
,, 3	Llandwrog (Glynllivon Park)	158	78	71	61	91	92	100	67	67	108	42	40	79
Anglesey	Holyhead (Salt Island)	135	84	83	43	76	65	54	45	35	87	44	56	67
Isle of Man	Douglas (Borough Cemetery)	117	130	112	83	92	109	67	31	30	117	50	42	78
Channel Islands	Guernsey, St. Peter Port (Grange Rd.)	110	151	100	66	85	89	93	64	140	63	77	57	88
Wigtownshire 3	Port William (Monreith)	112	129	67	67	86	106	107	50	21	64	58	41	73
Kirkcudbrightshire 3	Dalry (Glendarroch)	98	113	84	75	135	94	156	49	24	70	43	28	75
,, 4	Auchencairn (Torr House)	136	122	73	74	121	97	99	40	29	59	54	37	74
Dumfriesshire 3	Dumfries (Crichton Roy. Inst.)	176	82	70	76	117	103	109	42	45	67	59	14	77
Roxburghshire 3	Hawick (Wolfelee)	158	117	41	54	85	82	140	57	46	90	40	20	76
Peebleshire 2	Stobo Castle	166	140	74	116	83	83	170	78	49	107	60	13	93
Berwickshire 4	Marchmont House	59	139	38	80	36	47	126	45	56	95	83	45	71
East Lothian 5	North Berwick Reservoir	72	104	47	150	55	93	96	25	58	80	64	66	72
Midlothianshire 5	West Calder (Addiewell)	140	67	43	116	76	131	159	59	58	91	45	24	81
,, 5	Edinburgh (Blackford Hill)	147	69	45	119	81	94	170	26	91	82	64	34	83
Ayrshire 8	Girvan (Pinmore)	92	76	76	50	71	102	122	77	19	84	48	36	69
,, 13	Glen Afton (Ayr Sanatorium)	156	139	95	84	140	89	132	52	30	77	49	20	84
Renfrewshire 3	Shaws W.W. (Loch Thom)	134	127	107	113	121	92	114	81	18	62	67	34	86
Argyllshire 2	Loch Sunart (Glenborrodale)	102	80	58	148	72	118	132	152	31	139	61	33	89
,, 8	Lochgilphead (Poltalloch)	110	127	88	106	127	136	143	121	46	82	72	49	96
,, 11	Inveraray Castle Gardens	117	118	83	103	118	133	119	126	21	98	59	45	90
,, 14	Islay (Eallabus)	90	147	78	78	114	70	98	102	26	82	58	58	81
Kinross-shire 2	Loch Leven Sluice	109	102	60	68	68	84	150	24	86	82	44	28	72
Fifeshire 3	Leuchars (Aerodrome)	106	119	65	75	63	70	111	21	87	118	74	47	78
Perthshire 1	Loch Dhu	112	89	74	93	73	72	123	75	30	76	48	19	71
,, 7	Crieff (Strathearn Hydro)	112	100	56	69	81	58	110	29	60	93	67	20	70
,, 14	Blair Atholl (Blair Castle Gdns.)	134	155	54	73	75	37	105	45	80	122	94	19	83
Angus 4	Montrose (Sunnyside Asylum)	101	112	76	75	60	61	120	33	57	128	106	55	83
Aberdeenshire 1	Balmoral (Castle Gdns.)	111	112	38	93	51	83	120	29	96	198	118	35	92
,, 2	Aberdeen (Observatory)	83	181	83	111	42	50	110	45	41	157	110	59	90

Table XXI.—*Monthly Rainfall in* 1933 ; *the Average,* 1881–1915, *being taken as* 100 (*con.*)

County and River Division.	Station.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year.
		%	%	%	%	%	%	%	%	%	%	%	%	%
Aberdeenshire... 4	New Deer Schoolhouse	116	166	90	85	27	92	114	21	65	143	133	77	96
Morayshire..... 2	Fochabers (Gordon Castle)	49	181	29	89	31	88	97	49	82	202	59	17	82
,, ... 3	Grantown-on-Spey	68	142	37	124	59	69	95	64	40	184	62	10	79
Nairnshire 2	Nairn (Golf Course)	66	111	33	133	91	104	75	72	34	126	37	13	72
Inverness-shire .. 3	Alvie Manse	113	108	30	78	111	44	88	35	46	176	49	8	73
,, .. 6	Loch Ness (Foyers).....	124	72	29	99	46	80	80	84	31	179	36	11	72
,, .. 7	Loch Quoich (Glenquoich)	113	87	49	149	31	67	72	129	19	100	29	19	70
,, ..13	Arisaig House.....	85	118	60	146	58	110	121	113	26	118	65	40	85
,, ..17	Glenleven (Corrour)	107	79	76	107	69	98	93	104	27	94	38	14	71
Ross and Cromarty 4	Alness (Ardross Castle).....	84	106	47	107	43	116	90	52	18	139	82	10	74
,, 7	Ullapool	141	117	33	140	35	150	82	155	13	101	67	11	82
,, 9	Achnashellach.....	103	106	45	185	33	108	103	98	15	99	54	16	76
,, 10	Stornoway (C. Guard Station)	110	77	53	94	36	88	82	153	23	93	31	25	70
Sutherlandshire.. 1	Lairg.....	67	153	42	109	52	97	49	79	5	123	60	21	70
,, .. 4	Tongue	79	160	54	75	59	94	88	149	29	125	65	17	81
,, .. 5	Loch More (Achfary).....	113	115	44	146	31	108	95	189	27	127	73	25	89
Caithness-shire .. 2	Wick (C. Guard Station)	72	152	82	68	35	81	84	93	47	131	94	35	82
Shetland	Baltasound (Halligarth)	111	105	74	115	48	49	59	122	118	134	62	47	89
Co. Cork..... 6	Dunmanway (The Rectory).....	101	50	96	78	160	35	98	49	38	49	48	34	66
,, ,, ... 7	Cork (University College)	89	60	93	98	202	63	74	49	59	54	68	32	73
,, ,, ... 9	Mallow (Longueville).....	69	63	85	84	228	91	90	56	46	64	55	31	73
,, Kerry..... 3	Valentia (Observatory)	104	40	145	80	146	89	104	87	60	58	67	45	81
,, ,, ... 3	Gap of Dunloe (Gearhameen)	81	61	120	54	109	68	111	80	29	63	48	33	68
,, Waterford... 3	Waterford (Gortmore)	102	119	133	74	157	86	69	27	82	101	42	51	83
,, Tipperary ... 1	Nenagh (Castle Lough).....	114	113	119	52	156	109	83	43	59	65	28	40	78
,, ,, ... 3	Cashel (Ballinamona)	61	107	71	56	177	95	90	61	90	59	23	45	73
,, Limerick.... 2	Foynes (Coolnanes)	103	59	93	50	178	67	94	46	30	59	33	31	66
,, Wexford 4	Gorey (Courtown House).....	93	181	131	67	133	121	78	30	55	111	23	66	87
,, Carlow 2	Bagnalstown (Fenagh House)	73	135	111	36	100	102	80	33	96	114	48	51	77
,, ,, ... 3	Hacketstown Rectory	69	131	101	53	130	135	86	26	64	127	47	61	83
,, Leix..... 2	Abbey Leix (Blandsfort).....	79	155	116	39	91	113	84	49	77	77	63	70	82

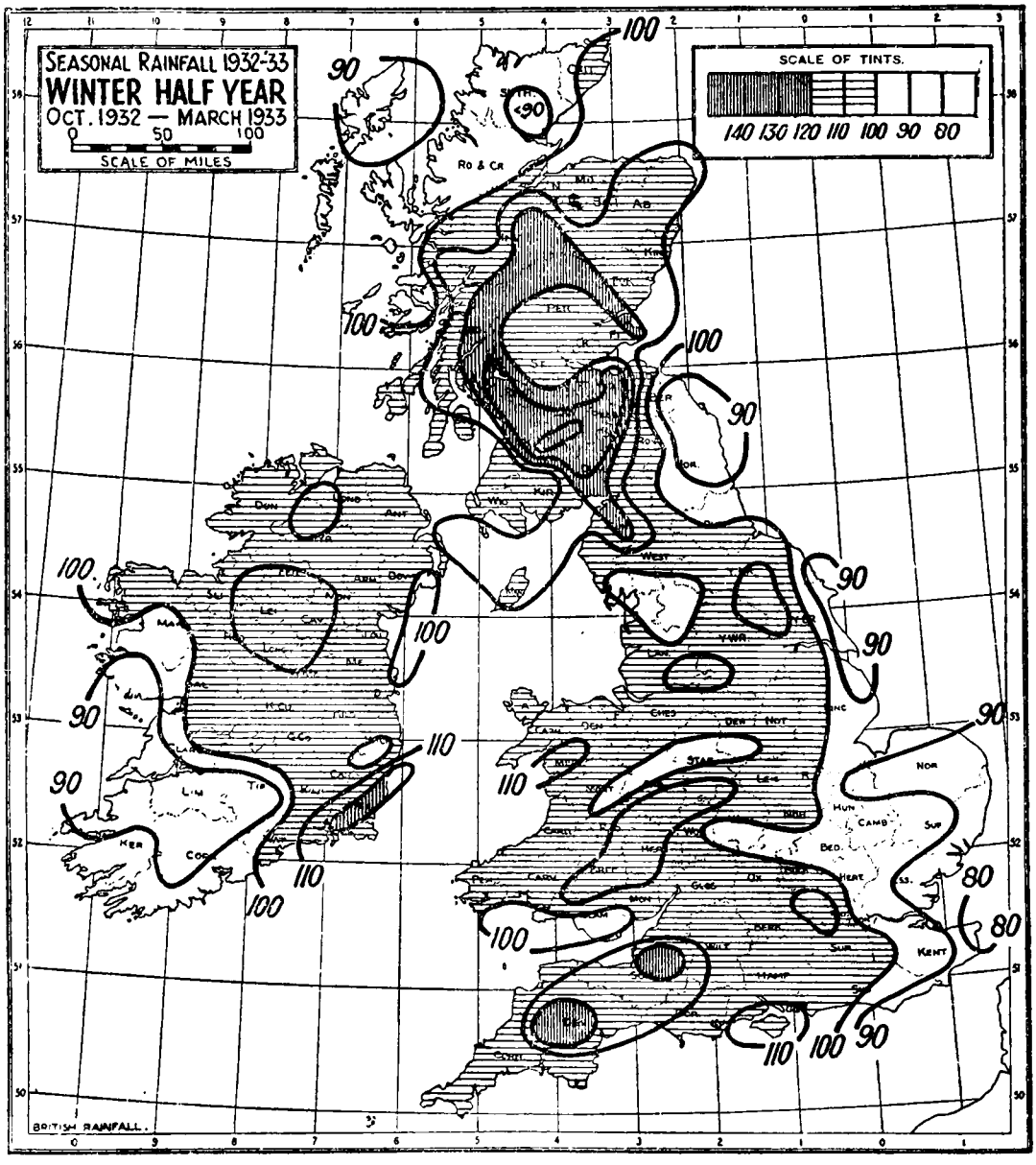
Table XXI.—*Monthly Rainfall in* 1933; *the Average,* 1881–1915, *being taken as* 100 (*con.*)

County and River Division.	Station.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year.
		%	%	%	%	%	%	%	%	%	%	%	%	%
Co. Offaly 1	Birr Castle	101	101	138	46	91	109	106	61	61	73	37	59	80
,, Kildare 2	Straffan House	97	198	90	60	69	79	71	51	63	121	57	34	80
,, Dublin 3	Balbriggan (Ardgillan) No. 1	73	129	101	58	94	79	66	30	60	116	47	69	74
,, Meath 4	Kells (Headfort)	103	136	76	77	69	112	71	32	23	81	62	48	72
,, Westmeath .. 1	Mullingar (Belvedere)	96	120	98	63	87	107	87	46	31	88	37	71	76
,, Longford 2	Newtownforbes (Cas. Forbes Gdns.)	118	116	117	62	89	121	128	51	28	69	35	56	80
,, Galway 3	Ballynahinch Castle	100	70	126	80	123	107	129	120	53	63	51	43	85
,, ,, ... 5	Ahascragh (Clonbrock)	133	91	143	58	96	88	80	53	48	87	48	38	79
,, Mayo 3	Blacksod Point	125	72	121	75	100	132	126	130	68	90	58	52	93
,, ,, ... 4	Westport House	117	52	88	56	87	109	101	94	41	95	52	34	75
,, ,, ... 5	Delphi Lodge	117	67	101	81	79	117	117	128	42	105	44	42	84
,, Sligo 2	Collooney (Markree Castle)	106	92	117	87	102	138	86	71	25	83	60	38	81
,, Fermanagh . 1	Newtownbutler (Crom Castle)	113	102	99	66	87	149	78	39	18	76	42	43	74
,, Armagh 5	Armagh (Observatory)	85	129	86	40	108	85	95	42	6	74	33	52	68
,, Down 1	Newry (Bridge Street House)	83	125	93	72	85	146	99	45	23	82	27	68	77
,, ,, ... 2	Seaforde	80	106	99	95	107	103	105	58	27	105	41	49	79
,, ,, ... 4	Donaghadee (Coastguard Station) .	79	153	127	83	107	76	77	68	32	74	102	78	87
,, Antrim 5	Ballymena (Harryville)	70	109	84	68	85	98	74	65	20	116	61	59	75
,, Londonderry 5	Londonderry (Creggan Reservoir) ..	116	99	77	53	97	112	101	70	26	117	56	53	80
,, ,, 5	Bellarena	89	112	66	57	123	82	78	61	19	98	52	61	74
,, Tyrone 3	Omagh (Edenfel)	107	113	92	75	75	86	77	56	15	83	37	56	72
,, Donegal 3	Milford (The Manse)	107	82	97	60	80	98	98	59	22	133	55	49	78
England	(general mean*, 57 stations)	**88**	**156**	**118**	**70**	**99**	**88**	**76**	**37**	**107**	**101**	**65**	**28**	..‡
Wales	(,, ,, 13 ,,)	**108**	**132**	**91**	**51**	**77**	**100**	**84**	**39**	**54**	**125**	**35**	**34**	..
England and Wales ..	(,, ,, 70 ,,)	**92**	**152**	**113**	**66**	**95**	**90**	**78**	**37**	**97**	**105**	**60**	**29**	..
Scotland	(,, ,, 43 ,,)	**108**	**117**	**60**	**100**	**71**	**89**	**110**	**75**	**43**	**112**	**64**	**30**	..
Ireland	(,, ,, 35 ,,)	**96**	**104**	**104**	**66**	**114**	**100**	**91**	**59**	**44**	**87**	**48**	**50**	..
British Isles †	(,, ,, 150 ,,)	**98**	**130**	**96**	**76**	**93**	**92**	**90**	**53**	**69**	**102**	**58**	**35**	..

*The "general" values given in the last six rows are obtained by taking the means of the percentage values for the stations
† Including Isle of Man and St. Peter Port, Guernsey. ‡ See Table XXIII.

9. SEASONAL RAINFALL, 1932-33.

There are definite advantages in considering the rainfall of the winter and summer separately. One defect of the calendar year

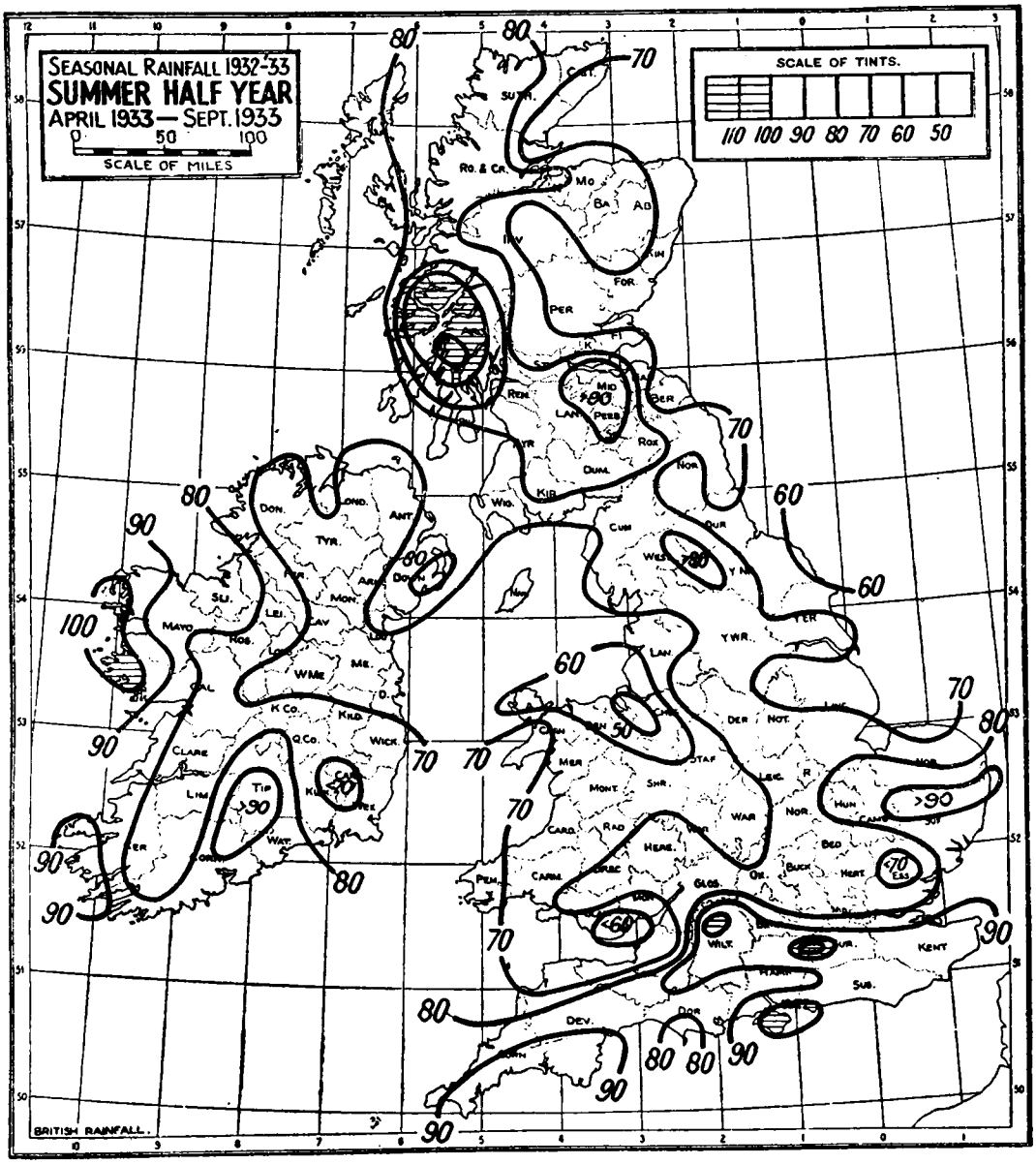


Rainfall, Winter Half-year, as per cent. of average.

as a unit of time for rainfall purposes is that part of a winter is included in one calendar year and the other part in another year.

Winter rainfall has a special economic importance, for, except in the wettest areas, the summer rainfall is, for the most part, lost by evaporation or absorbed by vegetation.

In this section the rainfall of the winter season, 1st October, 1932, to 31st March, 1933, and of the summer season, 1st April,



Rainfall, Summer Half-year, as per cent. of average.

1933, to 30th September, 1933, is dealt with, as well as the rainfall of the whole seasonal year, 1st October, 1932, to 30th September, 1933. It is natural to associate a summer season with the preceding rather than with the following winter season, since the water required in summer for replenishing streams and for the needs of animal and

vegetable life is derived, in part, from that which has been naturally stored during the previous winter season. One section of *British Rainfall* has been devoted to this subject since the volume for 1908, and three maps and Table XXII similar to those introduced in that volume, are now reproduced.

Rainfall, Seasonal Year, as per cent. of average.

Table XXII contains rainfall values for each of these two seasons for the stations shown in Section 8 on Monthly Rainfall. The values are expressed as percentages of the average fall for the season and the station. The table gives in the fourth column the corresponding percentages for each station for the whole of the seasonal year.

These last figures are not always the mean of the percentages for the two seasons, but often show a bias towards the winter value rather than that of the summer. This is due to the fact that the average rainfall for the winter is, in general, greater than that for the summer.

The *winter* half-year comprised two wet months, October, 1932, and February, 1933, while the remaining months gave either about the average or rather less than the average. The general rainfall during the winter over the whole country was 5 per cent. in excess of the average. The rainfall was most striking in Scotland, where the general excess was 11 per cent. England, Wales and Ireland each gave small excesses. The map shows that the rainfall of the winter half-year was in excess of the average over the greater part of the country. The largest percentage values occurred in central and southern Scotland, over Dartmoor and the extreme south-east of Ireland, as much as 137 per cent. being recorded at Stobo Castle, to the west of Peebles, and 141 per cent. at Glen Afton (Ayr Sanatorium). At the former station the total was 26·30 inches or 7·08 inches in excess and at the latter 43·25 inches or 12·55 inches in excess of the average. The rainfall was less than the average along the east coast of Great Britain, stretching as far inland as Warwick, from Welshpool to Derby, near Lancaster, as well as in the north-west of Scotland and south-west of Ireland. The smallest percentage values were 77 at Margate and 81 at Lowestoft and Stornoway. At Margate the total rainfall was 9·40 inches or 2·84 inches less than the average. The general rainfall of the winter 1932 to 1933 over the British Isles amounted to 24·7 inches, which is 1·3 inches more than the average.

The *summer* half-year comprised three moderately dry months and three very dry months, April, August and September. The general rainfall over the whole country was 23 per cent. less than the average, and less than that of any summer since that of 1921, when the general deficiency was 27 per cent. The map shows that the total rainfall was less than the average over practically the whole of the British Isles. More than the average was recorded over small areas, *viz.*: in the Isle of Wight, parts of Surrey, Hampshire and Wiltshire, over the Western Highlands of Scotland and the extreme west of Ireland. The most striking feature of the map is the large area in the west of Great Britain, including most of Wales and stretching across the north-east of Ireland, with less than 70 per cent. In this area less than 60 per cent. was recorded between Holyhead, Stafford and Southport as well as near Cardiff, and only 48 per cent. or 6·08 inches at Sealand to the west of Chester. Less than 70 per cent. was also recorded over a large area along the east coast of Great Britain from the Wash to Wick, with only 51 per cent. or 6·34

inches at Scarborough. The smallest percentage value in Scotland was 62 or 8·01 inches at Montrose (Sunnyside Asylum) and in Ireland 61 or 8·71 inches at Ardgillan to the north of Dublin. The largest percentage values were 111 at Lochgilphead (Poltalloch), 106 at Loch Sunart (Glenborrodale), both in the Western Highlands of Scotland and 105 at Blacksod Point in Co. Mayo. The general rainfall of the summer of 1933 over the British Isles amounted to 13·8 inches, or 6·7 inches less than that in 1932 and 4·2 inches less than the average.

The map for the *seasonal yeqr* naturally presents features similar to those of the two seasons already described. Thus the excess for the year over part of the south-west of Scotland is accounted for by the wet winter in that region, while the small percentage value along the east coast of England is due more especially to the dry summer in that region. The total rainfall for the seasonal year was less than 80 per cent. near Shoeburyness, along the east coast from Yarmouth to North Berwick, near Evesham, from Stafford to the estuary of the Dee, near Cardiff and near Dornoch. The small percentages in these areas were more especially due to the dry summer, but in some localities the rainfall of the winter was also less than the average. The total rainfall exceeded 110 per cent. over part of the Isle of Wight, at Fleet near Aldershot, at Okehampton and over a large area from Oban to Peebles. The total rainfall at Fleet was about 113 per cent. of the average, but larger percentage values were obtained in the south-west of Scotland. The general rainfall over the British Isles during the seasonal year was 38·5 inches, 2·0 less than that for the seasonal year 1931 to 1932 and 10·4 inches less than that for 1930 to 1931.

In *British Rainfall*, 1927, p. 125, a table was reproduced of the serial general values of seasonal rainfall for the British Isles from 1881 to 1927 and these statistics have been continued back to 1870. The statistics show that the summer of 1933, with 77 per cent. was drier than that of any other summer with the exceptions of those of 1921 and 1887 with 73 and 76 per cent. respectively. Less rainfall than that of the seasonal year, 1932 to 1933, with 92 per cent. occurred as recently as 1928 to 1929 with 90 per cent.

In *British Rainfall*, 1926, p. 125, values are given for England and Wales, Scotland and Ireland separately back to 1906-1907. The rainfall of the summer 1933, with 80 per cent., was most striking over Scotland, being less than that for any summer since before 1907. Over England and Wales and over Ireland the rainfall of the summer of 1933 was less than that for any summer since 1921. In Ireland the rainfall of the seasonal year, with 91 per cent., was less than that of any year since 1910 to 1911, with the exception of 1920 to 1921, when the general fall was also 91 per cent.

Table XXII.—*Seasonal Rainfall, 1932–33, in relation to the Average, 1881–1915.*

Station.‡	Winter 6 Months, Oct. 1932–Mar. 1933. Per cent. of Average.	Summer 6 Months, Apl. 1933–Sept. 1933. Per cent. of Average.	Twelve Months, Oct. 1932–Sept. 1933. Per cent. of Average.	Station.‡	Winter 6 Months, Oct. 1932–Mar. 1933. Per cent. of Average.	Summer 6 Months, Apl. 1933–Sept. 1933. Per cent. of Average.	Twelve Months, Oct. 1932–Sept. 1933. Per cent. of Average.
St. Pancras (Camden Square)....	96	76	86	St. Austell (Trevarna).....	103	95	100
Tenterden (Ashenden).....	96	93	95	Litton (Sherborne Res.).....	121	65	97
Margate (Cliftonville).....	77	98	86	Cirencester (Gwynfa).....	109	78	95
Edenbridge (Falconhurst)	101	93	98	Church Stretton (Wolstaston)...	114	68	92
Compton (Compton House).....	108	89	100	Market Drayton (Old Springs)...	97	58	78
Eastbourne (Wilmington Square).	87	95	90	Malvern (Free Library).....	104	75	90
Ventnor (Royal National Hosp.)..	120	104	113	Alcester (Ragley Hall).....	94	63	78
Fordingbridge (Oaklands).....	107	85	98	Birmingham (Edgbaston).....	114	68	92
Sherborne St. John.....	100	94	98	Grantham (Belvoir Cas. Gdns.)...	96	73	85
Royston (Therfield Rectory).....	93	77	85	Boston (Black Sluice, Skirbeck)..	95	75	85
Slough (Upton).....	111	78	96	Louth (Westgate).....	89	64	77
Oxford (Magdalen College).....	107	71	89	Worksop (Hodsock)	103	68	86
Pitsford (Sedgebrook).....	103	75	89	Derby (L.M.& S. Rly)	93	71	82
March	87	86	86	Manchester (Whitworth Park)...	116	72	94
Chelmsford (County Laboratory).	89	61	75	Stonyhurst (College)	98	64	82
Rendlesham Hall.....	87	87	87	Southport (Hesketh Park).....	107	59	84
Lowestoft (Secondary School)....	81	91	86	Ulverston (Poaka Beck).....	98	84	92
Bury St. Edmunds (Westley H.)..	99	92	95	Wakefield (Clarence Park).....	105	74	90
Sprowston (Oak Lodge).....	83	75	79	Hull (Pearson Park).....	90	74	82
Wells (Holkham Hall).....	97	66	82	West Witton (Ivy House).....	101	88	95
Calne (Castleway)	106	101	104	Felixkirk (Mount St. John).....	119	75	97
Weymouth (Westham House)....	108	73	94	York (Museum Gardens).....	112	69	90
Teignmouth (Den Gardens).....	116	94	107	Scarborough.....	86	51	69
Cullompton.....	111	84	100	Middlesbrough (Albert Park)....	104	66	85
Barnstaple (N. Dev. Athenæum)..	110	65	91	Newcastle (Leazes Park).....	91	72	81
Okehampton (Uplands).....	130	80	111	Bellingham (Highgreen).....	90	66	79
Penzance (Morrab Gardens).....	104	90	99	Ilderton (Lilburn Tower Gardens)	86	79	83

‡ For Counties see Table XXI, pp. 117–121.

Table XXII.—*Seasonal Rainfall*, 1932–33, *in relation to the Average*, 1881–1915—(*con.*).

Station.‡	Winter 6 Months, Oct. 1932–Mar. 1933. Per cent. of Average.	Summer 6 Months, Apl. 1933–Sept. 1933. Per cent. of Average.	Twelve Months, Oct. 1932–Sept. 1933. Per cent. of Average.	Station.‡	Winter 6 Months, Oct. 1932–Mar. 1933. Per cent. of Average.	Summer 6 Months, Apl. 1933–Sept. 1933. Per cent. of Average.	Twelve Months, Oct. 1932–Sept. 1933. Per cent. of Average.
Carlisle (Scaleby)	107	72	89	Girvan (Pinmore)	107	73	93
Keswick (Derwent Island)	125	71	103	Glen Afton (Ayr Sanatorium)	141	84	117
Appleby (Castle Bank)	109	82	97	Shaws W.W. (Loch Thom)	136	86	115
Abergavenny (Larchfield)	110	78	97	Loch Sunart (Glenborrodale)	97	106	101
Ystalyfera (Wern House)	116	72	98	Lochgilphead (Poltalloch)	120	111	116
Cardiff (Ely Pumping Station)	92	59	78	Inveraray Castle Gardens	129	100	117
Carmarthen (The Friary)	102	69	88	Islay (Eallabus)	108	79	96
Haverfordwest (Grammar School)	104	74	91	Loch Leven Sluice	113	77	97
Birmingham W.W. (Tyrmyndd)	101	61	85	Leuchars (Aerodrome)	123	69	96
Newtown (Penarth Weir)	95	75	87	Loch Dhu	112	76	98
Lake Vyrnwy	108	63	90	Crieff (Strathearn Hydro)	111	65	92
Sealand (Aerodrome)	104	48	76	Blair Atholl (Blair Castle Gardens)	127	69	102
Dolgelley (Bontddu)	110	66	92	Montrose (Sunnyside Asylum)	113	62	88
Llandudno (Cricket Ground)	104	58	83	Balmoral Castle Gardens	111	77	96
Llandwrog (Glynllivon Park)	105	79	94	Aberdeen (Observatory)	109	67	89
Holyhead (Salt Island)	105	52	83	New Deer Schoolhouse	114	67	92
Douglas (Borough Cemetery)	119	64	96	Fochabers (Gordon Castle)	110	73	91
Guernsey, St. Peter Port	97	91	95	Grantown-on-Spey	105	74	90
Port William (Monreith)	108	70	92	Nairn (Golf Course)	104	81	93
Dalry (Glendarroch)	108	85	99	Alvie Manse	120	65	95
Auchencairn (Torr House)	114	72	96	Loch Ness (Foyers)	121	69	97
Dumfries (Crichton Roy. Inst.)	128	80	106	Loch Quoich (Glenquoich)	108	79	97
Hawick (Wolfelee)	108	84	98	Arisaig House	110	92	102
Stobo Castle	137	97	119	Glenleven (Corrour)	124	81	108
Marchmont House	86	66	76	Alness (Ardoss Castle)	97	69	85
North Berwick Reservoir	103	72	87	Ullapool	98	94	97
West Calder (Addiewell)	122	99	111	Achnashellach	94	88	92
Edinburgh (Blackford Hill)	132	94	113				

‡ For Counties see Table XXI, pp. 117–121.

Table XXII.—*Seasonal Rainfall, 1932-1933, in relation to the Average, 1881-1915—(con.).*

Station.‡	Winter 6 Months, Oct. 1932-Mar. 1933. Per cent. of Average.	Summer 6 Months, Apl. 1933-Sept. 1933. Per cent. of Average.	Twelve Months, Oct. 1932-Sept. 1933. Per cent. of Average.
Stornoway (C. Guard Station)	81	81	81
Lairg	88	63	77
Tongue	93	83	89
Loch More (Achfary)	91	101	95
Wick (C. Guard Station)	105	69	88
Baltasound (Halligarth)	91	90	91
Dunmanway (The Rectory)	90	74	84
Cork (University College)	93	86	91
Mallow (Longueville)	89	96	91
Valentia (Observatory)	91	92	91
Gap of Dunloe (Gearhameen)	96	75	88
Waterford (Gortmore)	120	77	101
Nenagh (Castle Lough)	107	80	95
Cashel (Ballinamona)	89	92	90
Foynes (Coolnanes)	88	74	82
Gorey (Courtown House)	124	77	103
Bagnalstown (Fenagh House)	108	68	89
Hacketstown Rectory	99	78	89
Abbey Leix (Blandsfort)	109	74	92
Birr Castle	104	79	92
Straffan House	117	64	91
Balbriggan (Ardgillan) No. 1	99	61	80
Kells (Headfort)	105	62	84
Mullingar (Belvedere)	108	68	89
Newtownforbes (Cas. Forbes Gdns)	113	78	97
Ballynahinch Castle	88	102	94
Ahascragh (Clonbrock)	104	70	89
Blacksod Point	107	105	106
Westport House	93	81	88
Delphi Lodge	94	95	94
Collooney (Markree Castle)	110	82	98
Newtownbutler (Crom Castle)	114	70	93
Armagh (Observatory)	106	63	84
Newry (Bridge Street House)	103	77	91
Seaforde	98	81	90
Donaghadee (Coastguard Station)	115	73	95
Ballymena (Harryville)	102	68	86
Londonderry (Creggan Reservoir)	119	76	99
Bellarena	103	68	87
Omagh (Edenfel)	106	63	86
Milford (The Manse)	105	68	89
General Values* **England**	**102**	**77**	**90**
Wales	**104**	**66**	**88**
England and Wales	**102**	**75**	**90**
Scotland	**111**	**80**	**97**
Ireland	**103**	**77**	**91**
British Isles†	**105**	**77**	**92**

* Obtained by taking the means of the percentage values for the stations. † Including Isle of Man and St. Peter Port, Guernsey.
‡ For Counties see Table XXI, pp. 117-121.

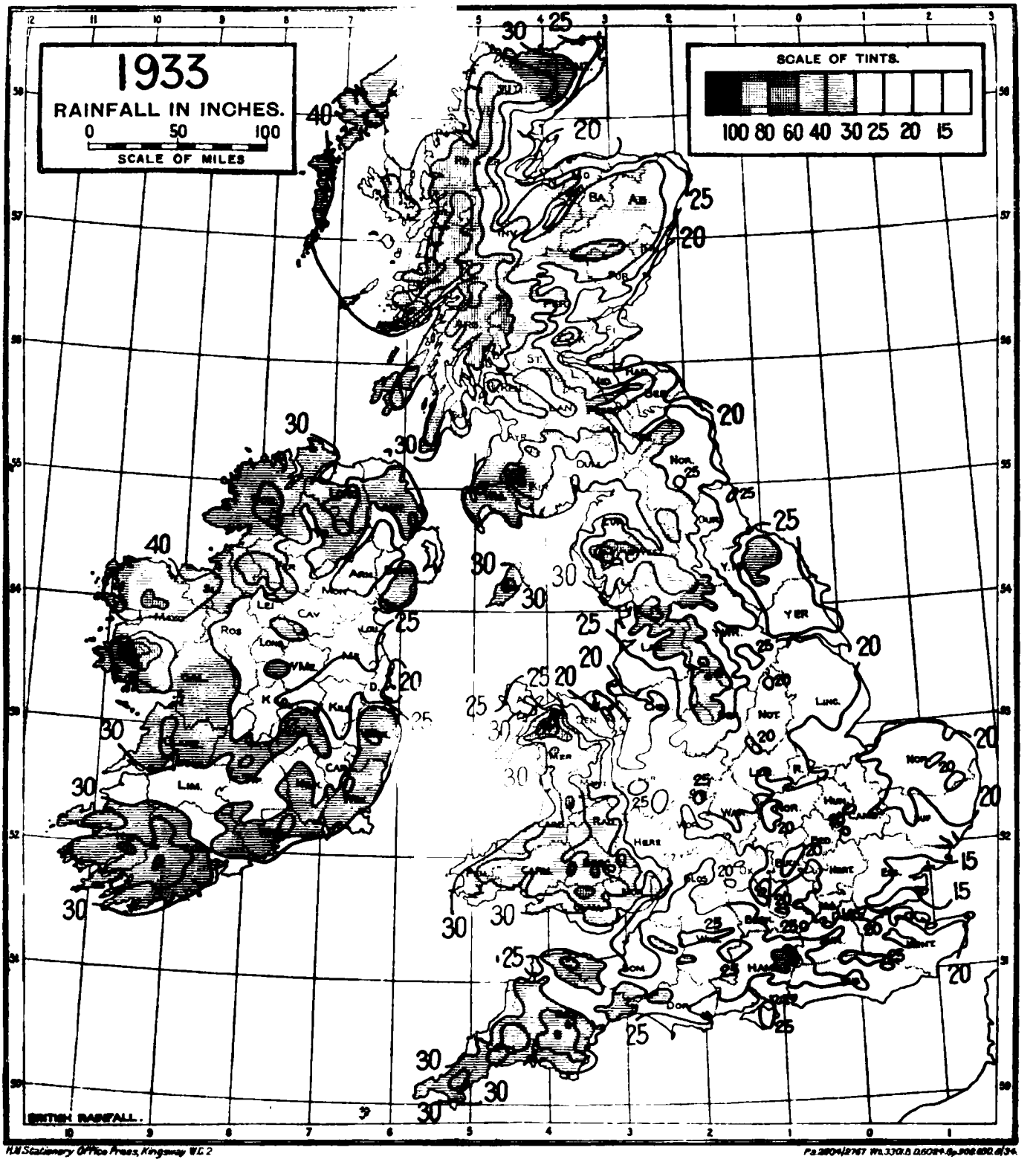
10. THE TOTAL FALL OF RAIN IN 1933 AND ITS RELATION TO THE AVERAGE.

The total rainfall for the year is given for over 5,000 stations in the British Isles in the General Table, Part III of this volume. As many of these totals as practicable have been plotted on a map on the scale of 19 miles to the inch. In the districts of relatively few rainfall stations, each record has been plotted, while in the more thickly represented areas some have had to be omitted. Isohyetal lines, or lines of equal rainfall amount, have been drawn giving a cartographical presentation of the distribution of the rainfall of the year over the land. The map is reproduced on a smaller scale as the folding plate opposite this page. Such a map is dominated by the orography of the country to such an extent that not only is it complicated in itself, but it also closely resembles its predecessors, the differences being noticeable only after detailed examination and comparison. The characteristics of a particular year are brought out better by a map such as that opposite p. 134, in which the percentage ratio of the rainfall for the year to the local average is shown. It has been coloured so that blue areas represent regions where the fall in 1933 was more than the average, and red areas represent regions where the fall in 1933 was less than the average. The statistics on which the latter map is based are set out in Tables XXI and XXIV.

The percentage map for 1933 shows by means of continuous lines the places where the values of the rainfall were, respectively, 70, 80, 90 and 100 per cent. of the average values.

The total rainfall was less than the average over the whole of the British Isles with the exception of small areas in eastern Yorkshire, Durham and Hampshire.

In Ireland the rainfall did not reach the average in any part of the country and only exceeded 90 per cent. over a small area in the extreme west of Co. Mayo. The greater part of the country received between 70 and 80 per cent., while less than 70 per cent. occurred over a large area in the south-west, stretching as far north as Galway. In Scotland the rainfall was nowhere more than the average. The percentage values were less than 70 per cent. over a small area near Girvan, in Ayrshire, near St. Andrews, in Fifeshire, from Perth to Stirling, over the River Garry Catchment Area and over part of the Island of Lewis. On the other hand more than 90 per cent. was recorded over part of Argyllshire, the islands of Tiree and Coll, to the east of Skye, part of the Grampians and the north-east of Aberdeenshire. The rainfall was less than 90 per cent. over most of England and Wales and exceeded 100 per cent. in the following areas only :— from Doncaster to the north Yorkshire Moors, near Durham and to the north of Winchester and near Aldershot. The large percentage value at Ovington Rectory, near Winchester, was due in part to the



H.M. Stationery Office Press, Kingsway W.C.2

[Face page 130]

heavy snowfall of the 23rd to 26th February, amounting to 5·17 inches and to the heavy rains of the 15th and 26th June and the 12th September which gave 2·37, 1·04 and 1·55 inches respectively, while that at Fleet, near Aldershot, was due largely to the heavy rainfall of September, *viz.* 7·65 inches, the thunderstorm on the 26th giving 5·16 inches. The most striking feature is the large area with less than 80 per cent. stretching across England and Wales from Norwich and Canterbury in the east to the neighbourhood of Worcester and then widening to include the north coast of Devon and Somerset, most of Wales, Cheshire and South Lancashire and the north of England. Locally in this region many small areas received less than 70 per cent., notably to the east of Snowdonia, from Liverpool to Oswestry, at Holyhead, near Plinlimmon, from Swansea to Cardiff, near Barnstaple, from the north of London to Harpenden, near Chislehurst and from Chelmsford to Southminster.

The smallest percentage values in Tables XXI and XXIV are 61 at Chelmsford (County Laboratory), 64 at Harpenden (Rothamsted) and 65 at Sealand Aerodrome near Chester, while the largest percentages are 108 at Goole and at Felixkirk (Mt. St. John), near Thirsk and 105 at Holme-on-Spalding Moor to the north-north-east of Goole and at Ushaw near Durham. No station in Wales or Ireland recorded as much as 100 per cent. and only one station in Scotland, *viz.* Ellon (Esslemont House) in Aberdeenshire where the value was exactly 100. The smallest values in Wales are 65 at Sealand Aerodrome and 67 at Holyhead; in Scotland, 68 at Perth (Wellshill Cemetery) and 69 at Girvan (Pinmore) in Ayrshire, and in Ireland, 66 at Dunwanway (The Rectory) in Co. Cork and at Foynes (Coolnanes) in Co. Limerick.

Use is made of the percentage values at the 271 stations of both Tables XXI and XXIV to derive general values of the total rainfall for the year over the British Isles and over the larger divisions separately. These values are set out in the following table :—

TABLE XXIII.—*General Rainfall,* 1933, *compared with average.*

Countries.	No. of Stations.	Average 35 years 1881-1915.	1933	
			Per cent.	Rainfall.
		in.		in.
England	136	32·67	82	26·8
Wales.....	24	50·14	76	38·3
England and Wales.....	160	35·23	81	28·6
Scotland	61	50·32	80	40·3
Ireland	48	43·30	77	33·5
British Isles†	271	41·41	80	33·3

† Including Isle of Man and Guernsey, St. Peter Port.

For the British Isles as a whole, the rainfall of 1933 was 20 per cent less than the average. The total rainfall was most striking over Scotland, Ireland and the British Isles, where it was less than that in any year since 1887. That over England and Wales was less than that in any year since 1921, when the value was 70 per cent. No year from 1922 to 1932, inclusive, gave a rainfall over England and Wales or the British Isles as a whole less than the average amount. The total rainfall over Scotland was less than that of any year since before 1870 with the exception of both 1887 and 1870 which rank with 1933 as the driest years on record, the rainfall in each of the three years being 80 per cent. of the average. Over Ireland 1933 and 1887 rank as the driest years in this period each with 77 per cent. Over Scotland 1933 was the first year since 1922 with less than the average, while Ireland experienced less than the average as recently as 1932, with 95 per cent. Over the British Isles as a whole 1887, with 77 per cent., was the only year drier than 1933 since before 1870.

The year 1933 gave the smallest totals since before 1870 at a number of stations distributed widely over the British Isles. Amongst these the following may be mentioned :—

Station.	County.	Rainfall, 1933 in.	Rainfall, 1933 per cent.
Chelmsford (County Lab.)	Essex	13·71	61
Kibworth Beauchamp	Leicestershire	18·03	70
Neston (Vine House)	Cheshire	19·14	70
Southport (Hesketh Park)	C. Lancs.	22·57	71
Carlisle (Spital Cem.)	Cumberland	22·80	72
Birmingham W.W. (Nantgwilt)	Radnor	44·59	70
Bodfari (Nantlys)	Flint	20·53	75
Wrexham (Packsaddle Res.)	Denbigh	21·86	69
Blaenau Festiniog (Oakley Q.)	Merioneth	66·94	69
Marchmont House	Berwick	22·89	71
Girvan (Pinmore)	Ayr	34·53	69
Loch Dhu	Perth	56·65	71
Crieff (Strathearn Hydro)	Perth	28·59	70
Alvie Manse	Inverness	22·19	73
L. Quoich (Glenquoich)	Inverness	77·07	70
Collooney (Markree Castle)	Sligo	34·98	81
Armagh Obsy.	Armagh	21·59	68
Banbridge (Milltown)	Down	22·45	72
Limavady (Drenagh)	Londonderry	24·87	67
Omagh (Edenfel)	Tyrone	28·66	71

Details as to the driest and wettest years at individual stations in the British Isles, 1868 to 1924 are given in a paper in the *Quarterly Journal of the Royal Meteorological Society* for July, 1926.

The general distribution of the actual rainfall, as shown on the folding plate, is similar to that for other years. The total for the year was less than 15 inches in the neighbourhood of the Thames Estuary and less than 20 inches over much of south-east England from Dover to the Wash, stretching as far west as Worcester but excluding most of Norfolk and northern Suffolk, in the neighbourhood of Chester extending as far south as Shrewsbury, along the east coast of Scotland from Berwick to Stonehaven, around the Moray Firth and near Dublin. More than 100 inches were recorded in the English Lake District, over Snowdonia and over part of the Isle of Mull.

Among the largest totals reported for the year and set out in the General Table, Part III, the following may be mentioned :—

		Inches.
England ..	Cumberland, Borrowdale (Sprinkling Tarn)	105·25
	,, ,, (Styehead Tarn)	103·25
Wales ..	Carnarvon, Snowdon (Delta)	122·15
	,, ,, (Grib Goch)	121·55
Scotland ..	Argyll, Mull (Benmore)	114·83
	Inverness, Loch Quoich (Loan)	94·88
Ireland ..	Mayo, Aasleagh House	83·36
	,, Delphi Lodge	83·36

The stations with the largest annual totals during 1933 occurred therefore on Snowdon and in the Isle of Mull.

Some of the smallest totals for the year are set out below :—

		Inches.
England ..	Essex, Wickham Bishops	11·10
	Essex, Maldon	11·57
	Essex, Southminster (The New Moor) ..	12·05
Scotland ..	East Lothian, Fidra	15·62
	East Lothian, Dirleton	16·79
Ireland ..	Dublin, Lambay Island	17·47
	Dublin, Ringsend Pumping Station ..	18·28

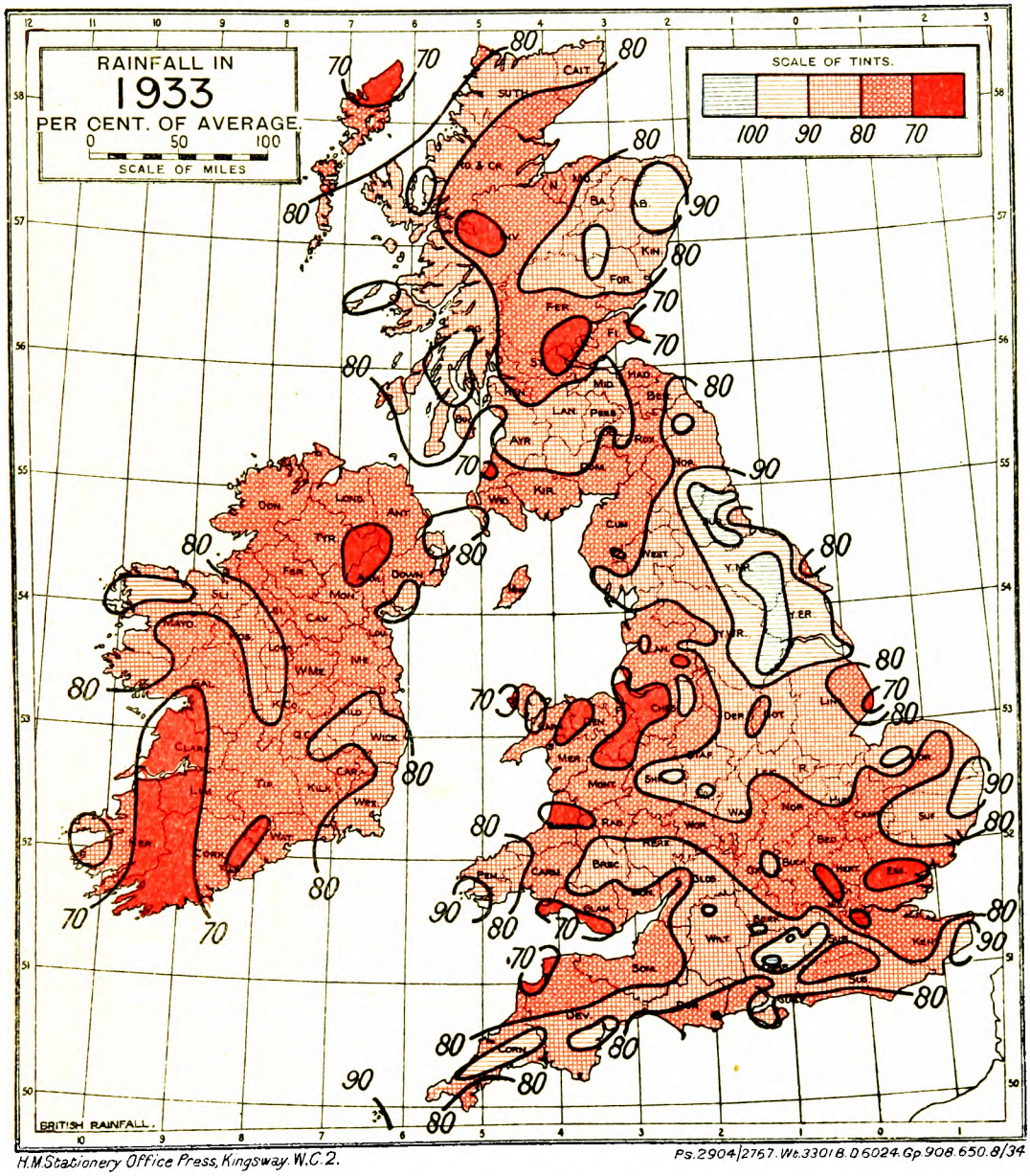
The smallest totals for the year were therefore recorded at stations in Essex, in the neighbourhood of the Thames estuary, to the north of the River Crouch.

TABLE.—XXIV.—*Rainfall of* 1933 *as Percentage of Average,* 1881-1915.*

County.	Station.	Per cent. of Average.
	ENGLAND.	
Surrey....	Reigate (Wray Park Rd.).....	81
Kent.....	Folkestone (Cherry Gardens)...	91
,, ...	Lympne (Aerodrome)	75
,, ...	Biggin Hill (Aerodrome)	71
Sussex....	Patching Farm.....	83
,, ...	Horsham (Wimblehurst).....	72
,, ...	St. Leonards (Gensing Gardens).	85
Hampshire	Totland Bay (Aston House)....	74
,, ..	Portsmouth (Victoria Park)....	76
,, ..	Grayshott	94
Berkshire .	Wellington College.....	83
,, .	Newbury (Greenham Common).	90
Hertford..	Harpenden (Rothamsted).....	64
Oxford ...	Middleton Park (*new g.*).....	82
N'hants...	Wellingborough (Swanspool) ...	72
,, ...	Oundle (Milton Road).....	83
Bedford...	Woburn (Experimental Farm) .	74
Cambridge	Cambridge (Botanic Gardens)..	73
Essex.....	Elsenham (Gaunts End).....	74
,, ...	Shoeburyness (New Ranges)....	77
,, ...	Bradwell-on-Sea.....	66
Suffolk ...	Felixstowe (Aerodrome)	81
,, ...	Campsea Ashe (High House)...	92
Norfolk...	Cromer (Howards Hill)	86
,, ...	Swaffham (The Villa)	98
Wiltshire..	Landford (Northlands).....	85
,, ..	Marlborough (College)	85
Dorset....	Bere Regis (Bloxworth House)..	79
,, ..	Beaminster (Farrs).....	83
Devon S...	Plymouth (The Hoe).....	85
,, ..	Tavistock	92
,, ..	Sidmouth (Sidmount)	91
,, N...	Torrington (Enfield).....	70
Cornwall..	Newquay (Mount Wise).....	85
,, ..	Falmouth (Observatory)	77
,, ..	Tresco Abbey	91
Somerset..	Chew Magna	73
,, ..	Batheaston Reservoir	86
,, ..	Somerton (Butleigh Court)	76
,, ..	Milverton (Spring Grove).....	73
Gloucester.	Cheltenham (Montpellier Gns.)..	88
Hereford..	Hereford (Belmont Abbey).....	83
,, ..	Leominster (Fairholme).....	79
Shropshire.	Shifnal (Hatton Grange).....	93
Stafford...	Leek (Wall Grange).....	77
Worcester.	Bromsgrove (Tardebigge Res.)..	71
,, .	Stourport (Lincombe Lock)....	76
Warwick..	Ryton-on-Dunsmore (Ryton Ho.)	84
Leicester..	Kibworth Beauchamp.....	70
,, ..	Thornton Reservoir.....	89
Lincoln ...	Spalding (Pode Hole).....	81
,, ...	Lincoln (Skellingthorpe Hall)..	86
,, ...	Skegness (Marine Gardens) ...	70
Nottingh'm	Nottingham (Strelley).....	78
,, ..	Retford (Babworth Hall).....	81
Derby	Buxton (Terrace Slopes)	71
Cheshire ..	Runcorn (Weston Point).....	67
,, ...	Woodhead Reservoir.....	79
Lancs. C...	Burnley (Swinden) *Lower g.*....	77
,, ..	Wigan W.W. (Worthington)....	75
,, N:..	Blackpool (Met. Observatory)..	78
,, ..	Garstang (Grizedale Res.).....	77
Yorks W.R.	Slaidburn (Dunsop Houses)....	73
Yorks W.R.	Goole	108
,, ..	Huddersfield (Oakes)	82
,, ..	Skipton (Chelker Res.).....	84
,, E.R.	Patrington (Rose Cottage) ...	89
,, ..	Holme-on-Spalding Moor	105
,, ..	Lowthorpe (The Elms)	93
,, N.R.	Pickering (Hungate Hall).....	102
,, ..	Guisborough (Lockwood Res.).	98
Durham...	Barnard Castle (County Schl.).	90
,, ...	Ushaw (College)	105
North'ld...	Morpeth (Cockle Park)	84
,, ..	Howick Hall	89
Cumberl'd.	Penrith (Newton Rigg).....	72
,, .	Borrowdale (Seathwaite)	73
,, .	Ravenglass (The Grove)	80
Westmorl'd	Grasmere (The Wray)	76
	WALES.	
Monmouth	Tredegar	75
Glamorgan	Gorseinon (Penllergaer)	71
Carmarth'n	Llanddeusant (Pontcrynfe)....	75
Pembroke.	Pembroke (Stackpole Court)...	91
,, .	St. Ann's Head (C. Guard Stn.)	96
Montgom'y	Welshpool (County School) ...	72
Denbigh ..	Wrexham (Pack Saddle Res.)..	69
,, ..	Denbigh (Garn).....	69
Merioneth.	Bala (Eryl Aran)	77
,, .	Corwen (Rug Gardens)	79
Anglesey ..	Llanerchymedd (Llwy'thEsgob)	76
	SCOTLAND.	
Dumfries..	Langholm (Ewes).....	74
Selkirk ..	Ettrick Manse	74
Midlothian	Moorfoot Hills (Gladhouse R.).	84
Ayr	Maybole (Culzean Castle Gdns.)	82
Renfrew ..	Paisley W.W. (Backth'ley'm.)	84
,, ..	Glasgow (Queen's Park)	78
Argyll	Corran Lighthouse.....	87
,, ...	Glen Etive.....	89
,, ...	Mull of Kintyre.....	83
,, ...	Loch Eck (Benmore).....	82
,, ...	Lismore (Mousedale)	87
Perth.....	Glengyle.....	76
,, ...	Perth (Wellshill Cemetery)....	68
Angus	Kirriemuir (Lintrathen)	81
Aberdeen..	Ellon (Esslemont House).....	100
Banff.....	Keith Station	83
Ross.....	Strathpeffer Spa.....	75
Sutherland	Melvich	82
	IRELAND.	
Kerry	Darrynane Abbey.....	73
Tipperary	Cahir (Abbey)	70
Wexford...	Foulkesmill (Longraigue)	89
Carlow....	Carlow (Browne's Hill).....	76
Dublin....	Dublin (Phœnix Park).....	77
W'meath..	Athlone (Twyford House).....	83
Louth	Greenore	87
Galway ..	Galway (Grammar School)....	68
Roscomm'n	Strokestown (Castlenode)	83
Mayo.....	Aasleagh House	88
Armagh...	Lurgan (Belle Vue).....	70
Down	Banbridge (Milltown)	72
Antrim ..	Aldergrove (Aerodrome)	71

*See also Table XXI, pp. 117-121.

RELATION OF RAINFALL IN 1933 TO THE AVERAGE OF 1881-1915.



The area coloured Red had rainfall below the average. that coloured Blue had rainfall above the average.

II.—EVAPORATION AND PERCOLATION IN 1933.

The *evaporation gauges* in use are square tanks sunk in the ground, and the evaporation which is measured is that from a free water surface. The standard gauge at Camden Square is 6 ft. square and 2 ft. deep, and is sunk so that the lip projects about 3 inches. The routine consists of the daily measurement of the level of the water below a mark fixed in the tank. From the difference between consecutive daily measurements, is deducted the rainfall for the same period, as measured in an adjacent rain-gauge. The net depression of the water-level in the tank during the interval of 24 hours is taken to be a measure of the evaporation. Sometimes in winter the "evaporation" comes out as a small negative quantity; this is regarded as due to the condensation of water from the superincumbent air, and the corresponding measurements are marked "c" in the tables. So far as is practicable, the level of the water is kept about 2 to 3 inches below the top of the lip. This necessitates water being added in summer and syphoned off in winter. During the winter months there is some difficulty in getting a reading when the water freezes. In such cases the ice is broken away from the side of the tank and the measurement of the water-level is made while the ice is floating. If this cannot be done any morning, owing to the thickness of the ice, a measurement is made as soon as possible (on a subsequent morning), and the amount of evaporation calculated over the whole period. The evaporation is small in winter, so that little information is lost by adopting this procedure.

The accuracy of the measurements of evaporation depends on the depth of water caught as rain in the evaporation tank being identical with that measured directly in the rain-gauge alongside. Some of the factors which are likely to vitiate the measurements of evaporation were discussed in *British Rainfall*, 1925, pp. 127–128.

The list of stations given in Table XXV, for which details of the evaporation are available for 1933, is the same as last year.

The evaporation from a free water surface at each station shows a well-marked seasonal variation. The amount is usually large in the six summer months, April to September, and much smaller in the remaining months of the year. During 1933, most stations recorded more evaporation than usual, this being associated with the abundant sunshine and unusual warmth, especially during the summer.

The evaporation during 1933 at many stations was more than that in any year since 1921, although at some stations, such as Kennick, Southport, Lower Laithe and Talla Water, other years, especially 1929, gave larger values.

The monthly and annual means for the thirteen stations are set out in the last column of the table. For the year the mean evaporation is 18·5 inches. This is 3·4 inches more than in 1932. The

largest value was 20·6 inches in 1921. August was the only month in which 1933 gave appreciably more evaporation than 1921. As much as 15·6 inches or 84 per cent. of the total was evaporated in the six summer months. There is a fairly uniform change from a maximum in June and July to a minimum in December, January and February, but the figures emphasize the sunny and dry August.

The monthly evaporation values for the 49 years, 1885 to 1933, at Camden Square (London) are set out in Table XXVII. The record is the longest available in this country. For 1933 the evaporation of 18·47 inches was 2·97 inches more than the average for the 35 years (1885–1919). The total evaporation was 4·91 inches more than that recorded in 1932, and there were only five years in the series with more evaporation, *viz.* 1921, 1911, 1906, 1901 and 1899 with 19·69, 19·53, 19·03, 18·93 and 18·88 inches, respectively.

From January to May the total evaporation was only ·19 inch in excess of the average, but in each of the five months from June to October the evaporation was appreciably in excess of the average. The total excess during this period was 2·53 inches, but larger excesses were recorded in 1921, 1911, 1906 and 1899. The total evaporation June to October, 1933, just exceeded the average evaporation for the six months May to October. The seasonal distribution of the evaporation reflects the general weather conditions prevailing during the year. The variations in the evaporation during winter months are usually small, the excess of ·17 inch in December being associated with dry winds during the month. Over the British Isles generally, the mean temperature appreciably exceeded the average during each month from March to October, the outstanding warm period being from June to September, when the mean temperature exceeded that of any similar period back to 1881. So far as sunshine was concerned the outstanding months were March, June, July, August and September, when the excess over the average has been computed as about 30, 21, 17, 35, and 33 hours respectively.

In Table XXVI the amount of water which percolates through a definite depth of soil is given. The list of stations is the same as for 1932. Details of the percolation gauges and the type of soil are set out in the footnotes, in *British Rainfall*, 1924, p. 128, and in *British Rainfall*, 1932, p. 143. The difference between percolation and rainfall is largely to be accounted for by evaporation, but evaporation as determined in this way (known as "calculated evaporation") is not strictly comparable with that given in the earlier table. There is no free water surface present in the percolation gauge, but during dry periods the surface soil is nearly dry, so that practically no evaporation can take place. In dry years the calculated evaporation, as obtained from the percolation gauges, will be less than similar values for wet years, and appreciably less than the values obtained from the water surface in a tank. In 1933 the mean value from the 11

percolation gauges was 12·94 inches, compared with 18·53 inches from the evaporation tanks.

At Compton, no rain percolated through the gauge (which consists of 10 inches of soil, on which grass is grown, over 2 feet of well-rammed chalk) from March 30th to May 6th and after May 18th. At Farlington the total percolation for the nine months April to December was ·61 inch through the 12-inch gauge and less than one-tenth of an inch through the deeper gauges. At Rothamsted the total percolation from April 1st to September 23rd was less than ·2 inch, but the heavy rainfall after the 12th was sufficient to start percolation on the 24th. The total rainfall during the three months June to August was only 2·90 inches. Additional rainfall could have fallen during these months, and possibly at other times during the year, without giving any percolation and thereby increasing the values for the calculated evaporation. At Craibstone the total percolation for the six summer months April to September was less than ·2 inch in each gauge.

As in 1932, rather more rain passed through the 40-inch and 60-inch gauges at Rothamsted than through the 20-inch gauge. The larger drainage through the 40-inch gauge has been a feature of the records since they were first started. In the discussion of a paper on the "Subterranean Water in the chalk formation of the Upper Thames and its relation to the supply of London," read before the Institution of Civil Engineers in 1891, Dr. J. H. Gilbert explained this as due to the different composition of the soil, the sub-soil at Rothamsted being extremely variable. As the values for the percolation through the gauges 20 inch and 60 inch deep show no marked difference it seems reasonable to conclude that the 20-inch gauge at Rothamsted is of sufficient depth to give a good indication of the water likely to go into "permanent storage." At Farlington, however, the records show appreciably less percolation through the deepest gauge.

The percolation through the three gauges at Craibstone, each 40 inches deep, differs but little. In 1933 the gauges were under potatoes, whereas in 1932 they were under pasture.

All percolation gauges gave large amounts of percolation during January, February and March. At all stations except Craibstone there was also much percolation in May. At Harrogate the percolation also exceeded an inch in October and November, while at Craibstone where December was wet, the percolation was also appreciable in December. The excess of percolation over rainfall in February at Craibstone is due in part "to snow which fell and drifted a little over the gauges. Mild conditions and heavy rain during the last few days of the month melted it, the resultant water coming through rapidly during that period. Although less than an inch of rain fell during the 25th, the drainage for the 26th rather exceeded an inch, the result partly of the melting of the accumulated snow."

Table XXV.—*Evaporation in* 1933.

List of Stations.	County.	Observer.	Particulars of Tank. Height above Ground.	Height above Sea Level.	Side.	Capacity.
			ft. in.	ft.	ft. in.	Gals.
Camden Square.	London 2	Royal Meteor. Soc. ..	0 3	111	6 0	450
Otterbourne ..	Hampshire 5	J. Hawksley, Esq. ..	0 3	112	6 0	450
Petersfield	,, ...6	C. J. P. Cave, Esq.*	0 3	747	4 0	250
Ormesby St. M..	Norfolk 2	Gt. Yarmouth W.W.	0 3	21	6 0	450
Kennick	South Devon 5	S. C. Chapman, Esq.	0 3	835	6 0	450
Bartley	Warwickshire....4	J. W. Wilkinson, Esq.	0 3	611	6 0	450
Southport	Cen. Lancashire...3	J. Baxendell, Esq. ..	0 3	37	3 0	112
Ardsley, No. 1	Yorkshire, W.R. 8	Wakefield Corp.W.W.	0 3	395	6 0	450
,, No. 2	,, ,, 8	,, ..	0 3	326	6 0	450
Lower Laithe ..	,, ,, 9	A. Atkinson,Esq.,C.E.	0 6	772	6 0	450
Harrogate	,, ,, 11	A. S. West, Esq.	0 3	589	6 0	450
Talla Water ..	Peebles 1	Messrs. Leslie & Reid	0 3	904	6 0	450
Glencorse Filters	Midlothian 4	,, ,,	0 3	639	6 0	450

1933.	Camden Square.	Otterbourne.	Petersfield.	Ormesby St. Michael.	Kennick.	Bartley.	Southport.
	in.	in.	in.	in.	in.	in.	in.
January	·08	c ·06	·07	·16	·14	·13	·05
February	·20	·28	·12	·28	·30	·10	·06
March	·80	1·44	1·19	1·06	·77	1·03	·87
April	1·70	1·88	1·62	1·66	1·72	1·94	1·35
May.....	2·36	2·81	2·52	2·28	2·72	2·43	2·42
June	3·48	3·67	3·49	2·75	3·60	3·53	3·35
July	3·44	4·27	3·35	2·96	3·44	3·88	3·46
August	3·13	3·74	3·18	2·87	3·13	3·57	2·65
September	1·86	2·43	2·16	1·62	1·72	2·23	1·63
October	·83	1·22	·98	·88	·98	1·07	·78
November	·33	·64	·33	·74	·38	·43	·14
December	·26	·36	·55	·77	·03	·33	·07
Year	18·47	22·68	19·56	18·03	18·93	20·67	16·83
Average, 1908–1933 ..	15·17	19·45	..	..	18·65	..	..
Difference	+3·30	+3·23	..	..	+ ·28	..	..

1933.	Ardsley No. 1.	Ardsley No. 2.	Lower Laithe.	Harrogate.	Talla Water.	Glencorse.	Mean of 13 Records.
	in.	in.	in.	in.	in.	in.	in.
January	·05	·00	·53	·22	·08	·00	·11
February	·32	·21	·06	·38	·12	·06	·19
March	1·21	1·14	1·38	1·13	·40	1·07	1·04
April	1·67	1·61	1·31	1·67	1·12	1·38	1·59
May.....	2·20	2·19	2·23	2·51	1·94	1·60	2·32
June	3·36	3·27	2·99	3·74	3·47	2·97	3·36
July	3·54	3·20	3·21	3·91	2·94	3·02	3·43
August	3·32	3·01	2·83	3·51	2·14	2·74	3·06
September	2·14	1·82	1·84	2·43	1·47	1·25	1·89
October	1·20	·99	·88	1·57	·50	·83	·98
November	·21	·16	·28	·55	·02	·07	·33
December	·07	·05	·14	·34	·01	·00	·23
Year	19·29	17·65	17·68	21·96	14·21	14·99	18·53
Average, 1908–1933 ..	17·31	..	..	19·21	15·43	..	..
Difference	+1·98	..	..	+2·75	−1·22	..	..

NOTE.—In the Table, " c " indicates an excess of condensation over evaporation.
* Per Royal Meteorological Society.

Table XXVI.—*Rainfall, Percolation and Calculated Evaporation in* 1933.

(Unless otherwise stated the size of the percolation gauges is 3 ft. × 3 ft. × 3 ft.)

1933.	Farlington, Hants.				¶Rothamsted, Herts.			
	Rainfall.	Percolation 12 in. Soil.	Percolation 24 in. Soil.	Percolation 36 in. Soil.	Rainfall.††	Percolation** 20 in. Soil.	Percolation** 40 in. Soil.	Percolation** 60 in. Soil.
	in.	in.	in.	in.	in.	in.	in.	in.
January	1·94	1·64	1·71	1·74	1·85	1·50	1·68	1·66
February	3·43	2·95	2·93	2·52	1·81	1·54	1·83	1·66
March	2·75	2·02	2·06	2·19	2·69	1·89	2·11	2·06
April	1·30	·01	·02	·04	·87	·00	·02	·01
May	2·43	·02	·00	·01	1·49	·17	·16	·15
June	1·65	·00	·00	.01	·99	·00	·00	·00
July	1 67	·00	·00	·00	1·35	·00	·00	·00
August	·80	·00	·00	·00	·56	·00	·00	·00
September	3·52	·00	·00	·00	2·27	·50	·44	·43
October	1·80	·18	·00	·00	1·33	·18	·12	·06
November.....	·56	·11	·00	·00	1·29	·89	·86	·83
December	·80	·29	·00	·00	·44	·16	·09	·07
Year	22·65	7·22	6·72	6·51	16·94	6·83	7·31	6·93
Calculated Evaporation	..	15·43	15·93	16·14	..	10·11	9·63	10·01

1933.	Compton, Sussex.		Harrogate, Yorks.		Craibstone, Aberdeen.			
	Rainfall.	Percolation.	Rainfall.	Percolation.	Rainfall.	Percolation.§ 1* 40 in. Soil.	Percolation.§ 2† 40 in. Soil.	Percolation.§ 3‡ 40 in. Soil.
	in.	in.	in.	in.	in.	in.	in.	in.
January	2·81	3·02	1·96	1·71	1·88	1·30	1·30	1·23
February	4·58	4·61	3·50	3·02	3·43	3·87	3·82	3·68
March	4.03	3·77	1·72	1·95	2·91	2·62	2·59	2·28
April	1·45	·00	1·35	·07	1·74	·05	·06	·01
May	3·22	·44	3·24	·85	1·16	·04	·07	·01
June	2·09	·00	1·30	·04	·94	.01	·02	·00
July	2·97	.00	2·65	·26	3·69	·00	·01	·00
August	1·17	·00	·32	·00	1·01	·00	·00	·00
September	2·88	·00	1·93	·79	1·34	·00	·00	·00
October	2·23	·00	3·97	1·55	5·84	2·48	2·47	2·53
November.....	·90	·00	2·73	2·20	4·26	3·53	3·58	4·25
December	·92	·00	·72	·26	2·65	1·74	1·86	2·15
Year	29·25	11·84	25·39	12·70	30·85	15·64	15·78	16·14
Evaporation	..	17·41	..	12·69	..	15·21	15·07	14·71

¶ Area of gauges one thousandth of an acre.
§ The gauges were under potatoes.
† Manured.
** Through bare unworked soil.
* Unmanured.
‡ Manured and limed.
†† Values obtained from the 8 inch gauge.

Table XXVII.—*Evaporation at Camden Square, London*, 1885–1933.

	Jan. in.	Feb. in.	Mar. in.	April in.	May. in.	June. in.	July. in.	Aug. in.	Sept. in.	Oct. in.	Nov. in.	Dec. in.	Total. in.
1885.....	·20	·38	·86	1·71	1·98	2·77	3·29	2·25	1·13	·77	·17	·11	15·62
1886.....	·23	·13	·53	1·59	1·78	2·93	3·12	1·86	1·46	·63	·27	·12	14·65
1887.....	c·07	·29	·76	1·72	1·79	3·68	3·76	2·54	1·25	·78	·21	·07	16·78
1888.....	·07	·37	·48	1·16	2·71	2·24	1·44	1·90	1·17	·60	·43	·03	12·60
1889.....	·03	·18	·62	1·07	1·76	2·97	2·34	1·96	1·52	·42	·29	c·13	13·03
1890.....	·08	·19	·50	1·44	2·63	2·14	2·33	2·02	1·27	·79	·31	·04	13·74
1891.....	·03	·16	·73	1·35	1·66	2·83	2·34	1·67	1·00	·62	·20	·22	12·81
1892.....	·05	·09	·60	1·88	2·65	3·05	2·84	2·20	1·01	·36	·02	·20	14·95
1893.....	c·03	·01	·92	2·33	3·06	3·62	3·12	2·85	1·48	·70	·11	·01	18·18
1894.....	c·04	·28	·83	1·17	2·10	2·48	2·49	1·91	·97	·37	·20	·11	12·87
1895.....	·14	·64	·36	1·26	3·06	3·31	3·07	2·12	1·27	·54	·19	·07	16·03
1896.....	·16	·24	·64	1·57	3·06	3·21	3·63	1·96	·68	·47	·18	·00	15·80
1897.....	·23	·21	·76	1·23	2·99	2·48	3·60	2·49	·99	·63	·26	c·14	15·73
1898.....	·19	·37	·51	1·28	1·56	2·10	2·96	2·53	1·73	·45	·11	·16	13·95
1899.....	·04	·28	·52	1·24	2·34	3·67	4·03	3·78	2·01	·45	·41	·11	18·88
1900.....	·03	·16	·80	1·46	2·35	2·85	4·25	2·61	1·61	·89	·24	·15	17·40
1901.....	·13	·24	·60	1·98	3·25	3·85	3·37	3·19	1·42	·64	·31	c·05	18·93
1902.....	·16	·15	·71	1·75	1·78	2·33	3·30	1·71	1·47	·69	·28	·27	14·60
1903.....	·26	·39	·97	1·57	2·24	2·79	3·35	2·53	1·51	·86	·29	·12	16·88
1904.....	c·09	·26	·54	1·68	1·81	3·32	4·06	2·86	1·20	·50	·26	·02	16·42
1905.....	·17	·35	·65	1·14	3·19	2·49	3·65	2·23	1·24	·78	·09	·16	16·14
1906.....	·06	·21	·73	1·90	1·90	3·53	3·65	3·46	2·38	·78	·27	·16	19·03
1907.....	·21	·38	1·02	1·27	1·93	2·47	2·65	2·24	1·72	·49	·27	·19	14·84
1908.....	·05	·27	·56	1·32	2·23	3·77	2·75	2·47	1·25	·48	·29	·14	15·58
1909.....	·14	·30	·30	1·85	2·93	1·70	2·60	2·23	·84	·76	·17	·16	13·98
1910.....	·22	·17	·80	1·43	2·52	2·57	2·00	2·12	1·42	·76	·19	·10	14·30
1911.....	·15	·32	·59	1·77	2·58	3·34	4·60	3·19	1·96	·64	·37	·02	19·53
1912.....	·24	·16	·79	2·34	2·44	2·49	2·55	1·69	1·41	·39	·33	·12	14·95
1913.....	·10	·32	·77	1·25	2·49	3·13	2·15	2·09	1·07	·61	·36	·32	14·66
1914.....	·09	·24	·52	1·84	2·56	2·93	2·72	1·99	1·68	·70	·28	·05	15·60
1915.....	·11	·13	·66	1·65	2·90	3·15	2·50	1·76	1·61	·56	·25	c·03	15·25
1916.....	·19	·34	·30	1·61	2·32	2·20	2·23	2·34	1·20	·76	·34	c·04	13·79
1917.....	·11	·17	·53	1·18	3·06	3·01	2·81	1·95	1·16	·75	·34	·12	15·19
1918.....	·14	·27	·85	·89	2·38	3·01	2·59	2·04	1·69	·40	·24	·16	14·66
1919.....	c·12	·13	·66	1·06	2·94	3·39	1·90	2·78	1·53	·61	·08	·06	15·02
1920.....	·20	·24	·78	·85	2·71	2·85	2·09	2·00	1·04	·66	·04	·00	13·46
1921.....	·20	·28	·96	1·91	3·04	3·66	4·17	2·56	1·72	·72	·19	·28	19·69
1922.....	·16	·31	·96	1·20	2·93	3·36	2·09	1·74	1·11	·66	·27	·14	14·93
1923.....	c·01	·16	·65	1·26	2·16	2·16	3·59	2·79	1·24	·73	·24	·02	14·99
1924.....	c·17	·28	·73	1·28	2·27	2·91	3·21	1·82	1·11	·59	·33	·11	14·47
1925.....	·12	·30	·83	1·30	2·34	3·48	2·61	1·58	1·01	·56	·37	·00	14·50
1926.....	c·03	·12	1·03	1·06	2·07	2·50	2·51	2·12	1·34	·74	·20	·05	13·71
1927.....	·05	·19	·65	1·45	2·91	2·64	2·01	1·75	1·08	·37	·29	·13	13·52
1928.....	c·04	·23	·70	1·33	2·15	3·04	4·08	2·17	1·67	·57	·36	·03	16·29
1929.....	·20	·29	·64	1·53	2·66	2·93	3·42	2·22	1·81	·80	·27	·14	16·91
1930.....	·13	·26	·90	1·07	1·82	3·07	2·85	1·98	1·16	·71	·28	·08	14·31
1931.....	·03	·22	·88	1·03	1·92	2·69	2·60	1·75	·97	·68	·12	·24	13·13
1932.....	·14	·33	·64	1·08	1·65	3·05	2·33	2·33	1·05	·63	·23	·10	13·56
1933.....	·08	·20	·80	1·70	2·36	3·48	3·44	3·13	1·86	·83	·33	·26	18·47
Average 1885–1919...	·10	·25	·66	1·51	2·43	2·91	2·97	2·33	1·38	·62	·25	·09	15·50
Difference 1933	−·02	−·05	+·14	+·19	−·07	+·57	+·47	+·80	+·48	+·21	+·08	+·17	+2·97

Monthly Extremes of Evaporation, 1885-1933.

Largest—													
Amt. (in.)	·26	·64	1·03	2·34	3·25	3·85	4·60	3·78	2·38	·89	·43	·32	19·69
Year	1903	1895	1926	1912	1901	1901	1911	1899	1906	1900	1888	1913	1921
Smallest—													
Amt. (in.)	c ·17	·01	·30	·85	1·56	1·70	1·44	1·58	·68	·36	·02	c ·14	12·60
Year	1924	1893	1909 / 1916	1920	1898	1909	1888	1925	1896	1892	1892	1897	1888

Note.—c indicates condensation.

METEOROLOGICAL OFFICE, AIR MINISTRY

BRITISH RAINFALL ORGANIZATION

BRITISH RAINFALL, 1933

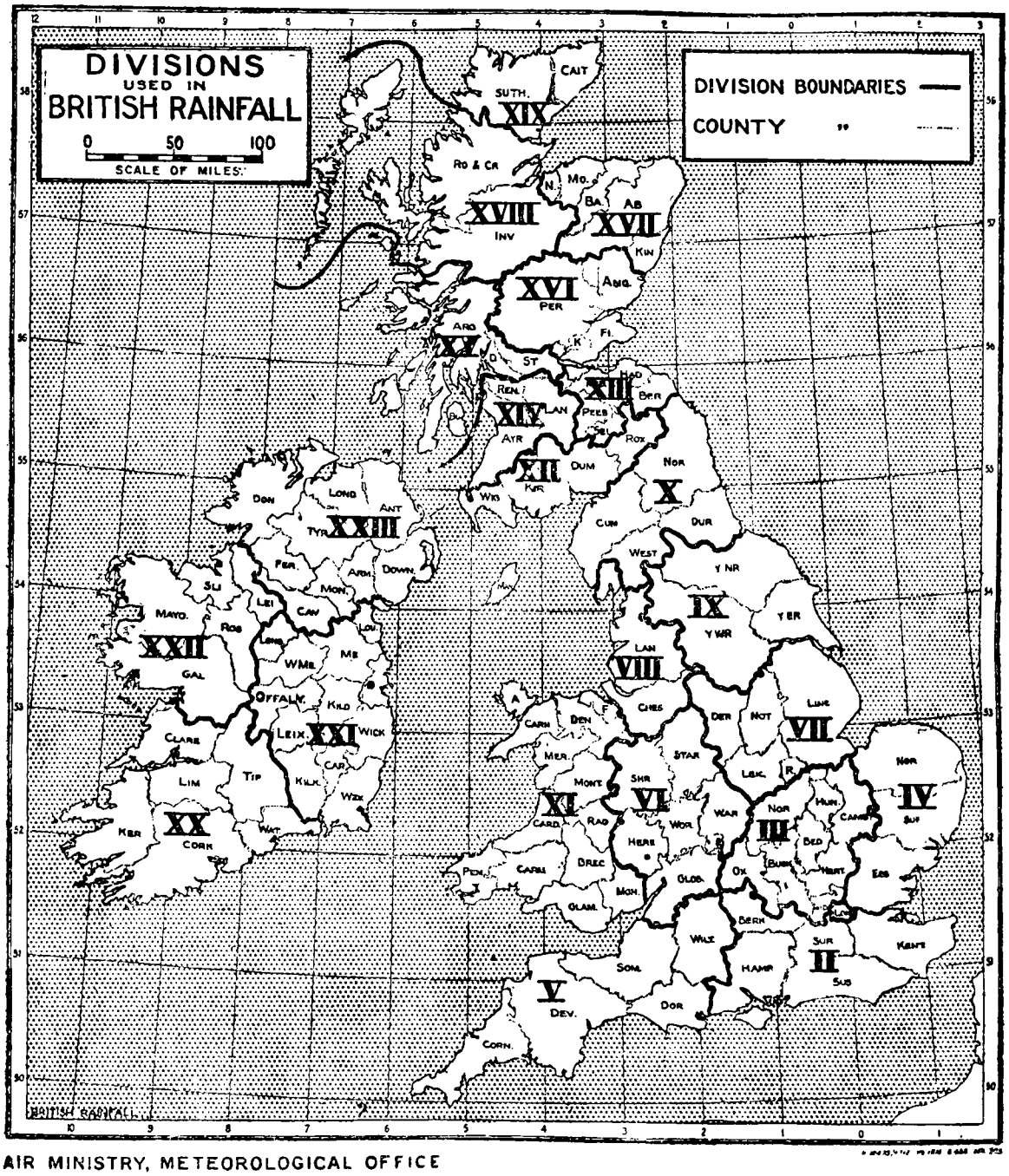
PART III

General Table of

TOTAL RAINFALL IN 1933

AT STATIONS IN GREAT BRITAIN
AND IRELAND WITH THE NAMES OF
THE OBSERVERS OR OTHER AUTHORITIES
FOR THE OBSERVATIONS

Issued by the Authority of
the Meteorological
Committee



AIR MINISTRY, METEOROLOGICAL OFFICE

GENERAL TABLE OF TOTAL RAINFALL IN 1933.

EXPLANATORY NOTE.

The Divisions of Great Britain in the General Table are the same as those adopted by the Registrars-General of England and Scotland. They are shown on the map facing this page.

The counties are divided up into numbered areas, corresponding to the river-basins. An account of these river-divisions for England and Wales was given in a special article in Part I of *British Rainfall*, 1910 (pp. 37-66), and a similar article on the river-divisions of Scotland and Ireland appeared in Part I of *British Rainfall*, 1911 (pp. 40-72), with detailed maps showing all the river-divisions in each Division. Reprints of these articles are available. The areas of the river basins of the Great Ouse and tributaries in Norfolk and Cambridge were redetermined in 1928; the values printed in this volume and in the volume for 1927 differ slightly from those published in *British Rainfall* from 1910 to 1926. The sequence of river divisions in Great Britain proceeds anti-clockwise from the Solway Firth. For example, in the West Riding of Yorkshire we have four divisions for rivers flowing to the Irish Sea, followed by eight divisions for rivers tributary to the Humber.

The stations in each river-division are arranged nearly in the order of their latitude from South to North. For convenience, the first name defining a station is that of a place which can be found on any large scale map; occasionally it is an adjoining county. The second name is added to fix the site of observation more closely, *e.g.*, "Haslemere (Clammer Hill)" means Clammer Hill, near Haslemere.

Stations the names of which are printed in small capitals, *e.g.*, KENSINGTON PALACE, are climatological stations in association with the Meteorological Office. For the majority of these a summary of the climatological observations is printed in the *Monthly Weather Report*.

In some cases the records have been received from a local rainfall organization. This has been indicated by a footnote.

In the column headed "Diameter," figures in old style type indicate the length of the sides of rectangular gauges.

The letter D signifies that daily observations have been received and are complete for the year; d, that less complete daily records have been received; W indicates that weekly readings have been received, and M that the gauge is read only once a month, usually on the 1st.

(R) denotes that the gauge is a mechanical one the correct reading of which depends on the mechanism being in working order.

(A) denotes that the amount of rainfall is taken from the chart of an autographic instrument.

(+A) denotes that the amount of rainfall is taken from an ordinary gauge and that an autographic instrument is also in use.

Where two or more gauges are maintained at the same station the comparison of the records is seldom of general interest. The rule has now been adopted that in such cases only one record will normally be published in *British Rainfall.* The use of mechanical gauges for measuring the total rainfall is not recommended by the Meteorological Office and the number of records marked (R) or (A) is therefore small.

Gauges which have been inspected and found to be over-exposed on moorland have been so marked. It is likely that there are other gauges (notably some of those at lighthouses) which are also over-exposed.

The column for the total rainfall in millimetres, which was a feature of the corresponding table in the volumes for the years 1914 to 1925, has been omitted since 1926, and the space thus set free is devoted to a column for average annual totals, expressed in inches, to the nearest tenth of an inch. The averages are printed in ordinary type if they are either the mean of the annual values for the standard period 1881 to 1915, or, in the case of shorter records, if they have been reduced by the accepted method to the standard period. If the computation has been made outside the office the average is printed in italics, since it may subsequently be revised slightly. The average is also given in italics if it is the mean for twenty or more years other than the standard period or if the mean has been weighted to some other period. Averages for the standard period of 35 years 1881 to 1915, are always preferred for entry in the table. Many of the averages printed in italics have been kindly computed by Mr. H. P. Cornish of Keswick and these are weighted to the standard period 1881 to 1915.

A few entries of total rain will be found in brackets—indicating that the values have been corrected, *e.g.*, when snow has been lost, when the amount for a short period has been computed from other records, or when the gauge has been moved a short distance during the year. A record is not as a rule printed if the gauge has been moved more than a mile, or if there is a greater difference than 50 ft. of altitude between the two positions.

A note of interrogation (?) implies doubt, not necessarily error. The absence of information is indicated by ..

COUNTY INDEX TO GENERAL TABLE.

ENGLAND.

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Cheshire	198	Lancashire	199	Stafford	190
Cornwall and Scilly	182	Leicester	193	Suffolk	171
Cumberland	214	Lincoln	194	Surrey	147
Derby	196	London	146	Sussex	154
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Cork	250	Limerick	251	Tyrone	260
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Dublin	254	Louth	255	Wexford	252
Fermanagh	258	Mayo	256	Wicklow	253
Galway	256	Meath	255		

ENGLAND AND WALES.

DIVISION I—LONDON. (Area, 117 sq. mi.)

STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
1.—THAMES.—Right Bank Tributaries. 67 sq. mi.		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
BERMONDSEY.								
D Southwark Park	London County Council...	5	1 0	9	24·4	16·37	111	95
LAMBETH.								
D Brockwell Park	London County Council....	5	1 0	144	23·8	15·57	121	94
D Brixton Hill Reservoir	Met. Water Board.....	5	1 1	121	23·9	15·49	138	89
BATTERSEA.								
D Battersea Park	London County Council...	5	1 0	13	23·2	17·68	129	93
WANDSWORTH.								
D Streatham (Arragon Gardens)	L. C. Johnson, Esq., ...	5	1 0	200	24·0	17·32	157	98
D Streatham (Conyers Road)	Met. Water Board.....	5	1 0	119	23·3	15·73	134	91
D Streatham Hill Reservoir	Met. Water Board.....	5	1 0	205	23·3	15·27	138	90
D Putney Heath Reservoir	Met. Water Board.....	5	1 6	179	..	18·04	134	91
D Balham High Road.....(+A)	E. J. Elford, Esq., C.E.....	5	1 6	89	24·7	17·48	147	100
D Southfields (Coronation Gds)(+A)	E. J. Elford, Esq., C.E.	5	1 6	37	23·6	16·15	127	88
CAMBERWELL.								
D Nunhead (Nunhead Reservoir)	Met. Water Board.....	5	1 0	175	..	16·80	147	98
DEPTFORD.								
D Telegraph Hill	London County Council...	5	1 0	135	..	15·66	127	91
D Waterworks	Met. Water Board.....	5	1 0	20	23·0	15·66	133	95
GREENWICH.								
D Deptford Pumping Station (+A)	London County Council....	8	1 0	18	22·4	16·94	127	96
D ROYAL OBSERVATORY	The Astronomer Royal	8	0 5	143	23·5	16·97	145	94
D Westcombe Park Road	Rev. T. R. Price.....	8	1 3	154	23·2	16·72	151	95
LEWISHAM.								
D Forest Hill Reservoir	Met. Water Board.....	5	1 0	337	24·6	19·16	167	114
WOOLWICH.								
D Eltham (High Street).....(+A)	Met. Water Board.....	5	1 0	245	23·2	15·98	113	90
2.—THAMES.—Left Bank Tributaries. 50 sq. mi.								
KENSINGTON.								
D Harley Gardens	Mrs. Hamlyn Price.....	5	1 5	29	23·7	18·51	159	102
D Holland House	Mr. P. B. Rintoul.....	5	1 0	69	23·9	18·79	125	94
D Campden Hill Reservoir	Met. Water Board.....	5	1 0	142	24·5	17·62	127	97
D KENSINGTON PALACE ....(+A)	H.M.O.W. (M.O.).....	8	1 0	80	..	17·84	134	99
HAMMERSMITH.								
D The Creek	London County Council...	5	3 0	19	23·2	17·59	137	97
FULHAM.								
D Hammersmith Cemetery	R. J. Brown, Esq.....	5	1 0	17	23·4	17·93	132	96
D Bishops Park .....(+A)	A. F. Holden, Esq., C.E....	5	0 11	15	22·6	16·96	116	92
CHELSEA.								
D Physic Garden	W. Hales, Esq.....	5	1 0	20	23·4	17·82	124	95
D Oakley Street	A. Hampton Brown, Esq...	5	1 0	26	..	17·27	144	94
D St. Luke's Gardens	J. A. Gough, Esq.	5	1 0	25	23·3	17·06	146	90

DIVISION I—LONDON—(*con.*).

	STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Rain-gauge: Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
	2.—THAMES.—Left Bank Tributaries—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
	WESTMINSTER.								
D	Western Pumping Station	London County Council...	8	1 0	19	..	16·18	128	87
D	King's Scholar's Pond P.S.	London County Council...	8	11 6	31	..	16·22	147	83
D	Buckingham Palace	Mr. A. J. Cole	5	8 0	35	23·5	17·47	138	91
D	Kensington Gardens	Prof. S. M. Dixon.....	5	1 0	78	..	17·10	133	96
D	ST. JAMES'S PARK (+A)	H.M.O.W. (M.O.)	8	1 0	27	..	17·29	144	95
D	Spring Gardens	London County Council...	8	6 0	35	23·2	14·81	139	87
	ST. MARYLEBONE.								
D	REGENT'S PARK	H.M.O.W. (M.O.)	5	1 0	129	..	16·91	134	99
	HAMPSTEAD.								
d	Barrow Hill Reservoir	Met. Water Board.....	5	1 0	175	..	17·75	(120)	(103)
D	Kidderpore Reservoir	Met. Water Board.....	5	1 0	328	..	17·50	125	96
D	OBSERVATORY (+A)	The Hampstead Scientific Soc. (E. L. Hawke, M.A.)	8	1 0	450	26·3	18·61	154	102
D	GoldersHill Park	London County Council...	5	1 0	350	26·2	19·53	149	105
	ST. PANCRAS.								
D	CAMDEN SQUARE (+A)	Royal Meteorological Soc. ..	8	1 0	110	24·5	16·76	149	98
D	Camden Square *Snowdon*	Royal Meteorological Soc...	5	1 0	110	24·5	16·77	149	98
M	Camden Square	Royal Meteorological Soc...	5	1 0	110	24·4	16·85	..	..
	Kentish Town (C.E. School)	The Headmaster	5	1 3	124	24·7	(18·05)	..	..
	STOKE NEWINGTON.								
D	New River Filter Beds	Met. Water Board	5	1 0	101	23·1	16·32	133	93
D	New River Reservoirs	Met. Water Board.....	5	1 0	105	23·5	16·03	130	97
	HACKNEY.								
D	Clapton Pond (+A)	P. Holt, Esq., C.E.....	5	1 0	69	22·8	14·90	127	91
	FINSBURY.								
D	New River Head	Met. Water Board.....	5	1 0	95	..	15·85	133	93
	BETHNAL GREEN.								
d	Victoria Park	London County Council...	5	1 0	43	23·1	17·03	..	93
	POPLAR.								
D	Isle of Dogs (Island Gardens)	London County Council.	5	1 0	18	21·9	15·18	128	91
D	Old Ford Pumping Station	Met. Water Board	8	0 9	19	22·9	16·49	151	100
D	Old Ford (Penstock House) (+A)	London County Council...	8	1 0	43	22·4	16·83	139	94
	WOOLWICH.								
D	N. Woolwich Pumping Stn. (+A)	London County Council...	8	0 9	12	21·6	15·31	126	101
D	Barking Outfall	London County Council...	8	0 9	9	20·8	16·24	124	99

DIVISION II—SOUTH-EASTERN COUNTIES

SURREY. (Area, 725 sq. mi.)

1.—ARUN. 45 sq. mi.

D	Haslemere (Clammer Hill)	Mrs. Glennie	5	1 6	400	*35·8*	28·58	143	118
D	Haslemere (Furnace Place)	F. J. Barlow, Esq.....	5	1 0	..	..	26·83	134	110
D	Haslemere (Grayshurst)	C. W. Dixon, Esq.....	5	1 0	621	..	26·87	142	105
D	Hambledon (Rossall)	L. R. Furneaux, Esq.	5	1 0	250	..	23·23	159	101

2.—MEDWAY. 50 sq. mi.

D	East Grinstead (Lockeridge)	Lt.-Col. J. F. Forbes, D.S.O.	5	1 0	320	..	23·98	152	121
D	Dormans Park (Chartham Park)	I. D. Margary, Esq.	5	1 0	270	..	24·13	158	113
D	Dormans Park (Hill Crest)	Dr. H. R. Mill	5	1 0	320	..	24·65	157	115
D	Dormans Park (Yew Lodge)	I. D. Margery, Esq.	5	1 0	260	..	24·00	149	111
d	Lingfield (Felcourt)	R. McAlpine, Esq.....	5	1 3	225	..	(24·73)	..	..
D	S. Godstone (Hartsridge)	F. E. Goad, Esq.	5	0 10	450	..	22·58	161	121
D	Bletchingley (North Park Farm)	H. C. Millen, Esq.....	5	1 0	300	..	24·58	151	123

DIVISION II—SOUTH-EASTERN COUNTIES—(*con.*).

STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
SURREY—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
2.—MEDWAY—(*con.*).								
D Godstone	C. J. Salter, Esq.	5	1 0	400	..	24·29	160	117
D Oxted (Stone Hall)	W. P. Metcalfe, Esq.	5	1 5	320	..	22·90	170	116
Oxted (West Heath)	Norman W. Grieve, Esq.	8	1 2	500	..	23·91	..	..
3.—THAMES—Darent. 22 sq. mi.								
Limpsfield (Kent Hatch Res.)	A. E. Cornewall-Walker, Esq.	5	1 0	664	..	21·20	..	..
D Westwood (Pumping Station)	A. E. Cornewall-Walker, Esq.	5	1 0	418	..	21·34	144	113
Tatsfield School	The Headmaster	5	1 3	741	..	23·14	..	..
Chelsham (Ledgers)	Mrs. H. A. Daniell	5	1 5	620	..	25·53	..	..
D Farleigh (Croydon Ment. Hosp.)	Croydon Corporation	8	1 0	100	..	23·41	137	119
Chelsham (Fairchildes)	A. S. Daniell, Esq.	8	1 0	600	*33·7*	24·47	..	..
D Addington (Hares Bk. Pump. Sta.)	Croydon Corporation	8	1 0	331	..	22·49	170	123
D Addington Hills Reservoir	Croydon Corporation	8	1 0	472	*29·4*	21·66	140	116
D Shirley (Residential Sch.)	W. H. Westacott, Esq.	5	1 0	197	..	23·01	124	110
D Norwood (Auckland Road)	Miss N. Cooper	5	1 5	230	..	16·70	142	93
4.—THAMES—Wandle. 71 sq. mi.								
D Kingswood (Margery Hall Res.)	W. Vaux Graham, Esq., C.E.	5	1 0	691	..	23·11	140	116
M Woldingham Reservoir (*New G*)	A. E. Cornewall-Walker, Esq.	5	1 0	841	..	22·38	..	..
D Woldingham	Miss V. K. Isaac	5	1 0	797	..	22·96	165	125
D Caterham Reservoir	A. E. Cornewall-Walker, Esq.	5	1 0	704	*34·6*	23·99	165	120
D Caterham Valley (Croydon Rd.)	A. M. Worfolk, Esq.	5	6 0	435	..	24·71	142	121
D Tadworth (Glade House)	W. J. Saunders, Esq.	5	1 0	545	..	26·01	172	119
D Chelsham & Woldingham W.W.	A. E. Cornewall-Walker, Esq.	5	1 0	479	..	23·34	151	123
D Woldingham (Marden Park)	Sir Bernard Greenwell, Bt.	5	1 0	500	..	23·44	159	120
D Caterham Valley Depot	A. E. Cornewall-Walker, Esq.	5	1 0	431	..	23·89	164	125
D Chipstead (South Lodge)	G. R. Rudolf, Esq.	8	1 1	550	..	24·92	169	122
D Coulsdon (Netherne Ment. Hosp.)	The Clerk and Steward	8	0 10	540	..	24·17	159	117
D Banstead (Burgh Heath)	Capt. E. R. Taylor	5	1 0	571	*32·6*	25·88	153	121
D Banstead (Burgh Heath Res.)	W. Vaux Graham, Esq., C.E.	5	1 0	570	*32·7*	23·57	140	121
M Chipstead (How Green Res.)	W. Vaux Graham, Esq., C.E.	5	1 0	528	..	23·96	..	..
D Kenley Pumping Station	A. E. Cornewall-Walker, Esq.	5	1 0	275	..	22·66	151	119
Coulsdon (Howard Road)	J. H. Lowe, Esq.	5	0 6	425	..	23·53	160	119
D Coulsdon (Marlpit Lane)	Charles Knight, Esq.	5	0 6	350	..	24·67	165	116
D Banstead Mental Hospital	S. J. Wray, Esq.	5	5 0	410	..	21·73	135	111
D Purley (Council Offices)	The Surveyor	5	1 0	225	..	22·78	140	110
D Purley (Selcroft Road)	E. W. Finch, Esq.	5	1 0	380	..	22·03	156	113
D Purley (Pumping Station)	A. E. Cornewall-Walker, Esq.	5	1 0	214	*30·1*	24·35	153	116
D Purley (Green Lane)	E. E. Bluett, Esq.	5	1 0	341	..	21·80	149	117
D Purley (St. Mark's Vicarage)	Mrs. D. L. P. Shattock	5	1 0	336	..	22·90	150	114
d Sutton (The Ridgway)	W. H. Boucher-James, Esq.	5	1 0	250	..	22·44	..	108
D Croydon (Aerodrome) (+A)	Officer-in-Charge	8	1 0	217	26·7	21·16	151	108
d South Croydon (Harewood Rd.)	The Late Mrs. Morland	6	0 8	300	..	21·30	..	115
D Carshalton (Pumping Stn.)	Surveyor, U.D.C.	5	1 0	83	..	19·37	143	102
D Carshalton (Park Road)	A. C. Challands, Esq.	5	1 0	200	..	20·10	140	103
d Carshalton (The Grove)	H. J. Spicer, Esq.	5	1 0	129	..	21·92	..	107
d Beddington (Sewage Farm)	Croydon Corporation	5	1 0	129	..	(19·51)	..	..
D Croydon (Northampton Road)	Mrs. Higgins	5	1 0	210	..	21·71	144	108
d Beddington Corner (Millgreen Rd.)	Messrs. G. Miller & Son	5	4 6	77	..	21·89	..	102
D Upper Norwood (Beulah Hill)	Rev. A. H. Shaw.	6	1 0	400	..	20·56	167	109
D Wimbledon (Compton Road)	G. H. Cheesman, Esq.	5	1 6	80	..	17·51	143	104
D Wimbledon (Sewage Pmp. Sta.)	T. Webster, Esq., C.E.	5	1 0	55	23·4	16·96	134	100
5.—THAMES—Mole & c. 229 sq. mi.								
D Horley (Smallfield)	W. W. Hughes-D'Aeth, Esq.	5	1 0	215	..	22·37	140	109
D Outwood (The Orchards)	H. Gurney, Esq.	5	1 0	274	*26·0*	22·15	143	111
D Dorking (Bramerton)	Rev. Jas. F. Twist	5	1 0	300	..	25·58	144	107
Dorking (Denbies)	Mr. J. Ansell	5	0 6	610	32·2	26·12	134	..
d Brockham	H. R. Kempe, Esq., C.E.	8	0 9	180	*31·2*	23·46	..	102

DIVISION II—SOUTH-EASTERN COUNTIES—(*con.*).

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SURREY—(*con.*).		*in.*	*ft. in.*	*ft*	*in.*	*in.*		
5.—THAMES—Mole & c.—(*con.*).								
D Betchworth (Snower Hill)	T. DuBuisson, Esq.	8	0 11	250	..	24·92	149	120
D South Nutfield (Hale Edge)	Mrs. B. Grant	5	1 0	250	*28·7*	21·49	150	128
D Earlswood (Sewage Farm)	G. G. Sanderson, Esq., C.E.	5	1 0	350	..	20·58	148	113
D Reigate (Hill-top Road)	H. E. Irving Taylor, Esq.	5	0 10	375	..	22·44	154	111
D Redhill (London Road)	A. E. Cornewall-Walker, Esq.	5	1 0	270	..	22·49	154	109
D Reigate (Woodcote)	Herbert Crosfield, Esq., J.P.	5	0 10	310	..	23·68	172	127
D Reigate (Wray Park Road)	W. J. MacAndrew, Esq.	5	1 0	330	28·9	23·26	150	117
D Reigate (Castle Grounds)	G. G. Sanderson, Esq., C.E.	5	1 0	350	*30·4*	23·07	160	117
D Reigate (Thurso)	F. S. Smith, Esq.	8	1 0	270	..	22·68	139	110
Reigate (Raglan Rd.)	G. E. Collip, Esq.	5	1 1	450	..	24·63	164	120
D Nutfield (Elstree) *new g.*	D. Morphew, Esq.	5	1 0	430	..	23·71	164	119
d Bletchingley (South Park Fm)	Uvedale H. Lambert, Esq.	5	1 0	340	*31·4*	21·19	..	101
D Merstham (Gatton Point)	C. F. Bull, Esq.	5	1 0	300	..	22·64	157	113
Effingham	A.E.Cornewall-Walker,Esq.	5	1 0	363	..	24·40	..	..
D Gatton (The Cottage)	J. F. E. Goad, Esq.	5	0 11	434	..	23·22	173	123
D Headley Rectory	Rev. T. E. R. Phillips	5	1 0	570	..	25·31	168	116
d Headley (The Hurst)	Mrs. Lyall	5	1 3	420	*32·2*	24·40	(165)	(118)
D Walton-on-the-Hill	Mr. J. Millichamp	5	1 0	600	*31·7*	24·24	168	119
D Fetcham W.W.	A. E. Cornewall-Walker, Esq.	5	1 0	102	..	23·89	154	115
D Leatherhead (Dunard Lodge)(+A)	G. R. Crompton, Esq.	8	1 0	233	..	23·97	155	110
d Leatherhead (Windfield)	Mrs. Still	5	1 5	250	..	22·74	..	115
D Tadworth	C. H. L. Blaxland, Esq.	5	1 4	600	..	26·09	191	133
D Epsom College	S. A. Weare, Esq.	8	1 6	300	..	22·21	155	103
D Banstead Grange	R. L. Powell, Esq.	5	0 10	390	..	28·05	154	128
D Epsom (Sewage Farm)	The Surveyor	8	1 0	120	*25·4*	21·27	143	105
D Whiteley Village (Fox Oak)	H. E. Cooke, Esq.	8	3 4	195	..	20·54	148	102
D Cobham (Uplands)	R. S. Morrish, Esq.	5	0 9	180	..	22·48	141	104
d Cobham (Sandroyd School)	C. St. John Shortt, Esq.	5	1 6	120	..	(20·33)	..	..
D Weybridge (St. George's Hill)	Mrs. Buckley	5	0 10	200	..	20·36	135	100
D Claygate (Hertslets)	N. C. Armitage, Esq.	5	1 0	106	..	18·49	167	103
D Esher (Halidon)	D. H. Baird, Esq., C.B.E.	5	1 5	114	..	19·11	141	106
D Sutton (Waterworks)	W. Vaux Graham, Esq., C.E.	5	1 6	166	*26·0*	20·79	138	104
D Sutton (Sewage Works)	W. H. Grieves, Esq., C.E.	5	2 5	99	*28·8*	20·45	144	105
d Worcester Park (Sewage Works)	W. H. Grieves, Esq., C.E.	5	3 0	60	..	20·02	..	..
D Surbiton (Seething Wells)	Met. Water Board	5	0 10	34	24·1	19·01	135	105
D Surbiton (Oakenshaw Hotel)†	K. G. Willis, Esq.	5	1 1	80	24·5	19·14	168	101
D West Molesey (Walton Works)	Met. Water Board	5	0 6	35	23·5	19·34	134	98
D New Malden (Dunbar Road)	J. W. Harris, Esq.	5	1 0	50	24·8	21·07	150	107
D New Malden (Sewage Works)	R. H. Jeffes, Esq., C.E.	5	1 0	48	..	18·05	139	100
D Kingston (County Hall)	W. E. Robinson, Esq.	5	0 9	31	..	17·76	134	96
D Kingston (Grammar School)	The Headmaster	5	1 0	34	..	16·14	123	90
D Kingston Sewage Works (+A)	P.G. Lloyd, Esq.	5	1 0	25	..	16·95	126	96
D Merton Park (Mostyn Rd.)	A. T. Bench, Esq.	5	1 0	55	25·0	18·86	(153)	(98)
D Merton Park (Innes Hort. Inst.)	Garden Superintendent	5	1 0	55	..	17·58	126	97
D Merton (Joseph Hood Rec. Gd.)	The Engineer	5	1 0	48	..	17·52	125	99
D Raynes Park (C. School)	The Headmaster	5	1 0	50	23·8	20·88	130	97
D Raynes Park (CottenhamPk P.S.)	T. Webster, Esq., C.E.	5	1 2	50	23·6	18·47	132	98
D Raynes Park (Richmond Road)	W. B. de Winton, Esq.	5	1 0	70	..	20·28	163	110
D Wimbledon (South Side)	Rev. A. Welsh Owen	5	1 0	179	..	19·20	142	97
D Wimbledon (West Side)	E. K. Wilson, Esq.	5	1 0	160	..	19·99	151	103
D Richmond (Terrace Gardens)	G. Humpfreys, Esq.	5	1 6	25	..	17·40	133	97
D KEW (OBSERVATORY)(+A)	The Superintendent	8	1 0	18	23·8	18·24	138	101
D Mortlake (Hammersmith Cem.)	R. J. Brown, Esq.	5	1 0	23	..	17·69	126	93
D Kew (Royal Botanic Gardens)	The Director	8	0 9	20	23·4	18·54	112	92
D Barnes (Barn Elms)	Met. Water Board	5	1 0	16	22·9	18·60	139	101
6.—THAMES—Wey. 236 sq. mi.								
D Haslemere (U.D.C. Depot)	A. G. Whitcher, Esq.	5	1 0	475	*36·2*	30·81	144	112
D Haslemere (U.D.C. Sewage Works)	A. G. Whitcher, Esq.	5	1 0	414	..	30·31	155	117
D Haslemere (Frensham Hall Gdns.)	H. Windibank, Esq.	5	2 0	750	..	32·41	154	122
D Haslemere (Frensham Hall Farm)	H. Windibank, Esq.	5	1 0	600	*37·4*	30·29	156	118
d Hindhead (Littledale)	F. Harrison, Esq.	5	1 0	770	..	29·64	..	101
D Oakwood Hill (Honeywood Ho.)	The Lady Tredegar	5	1 0	280	..	21·96	163	116

† Previously at Effingham Rd.

DIVISION II—SOUTH-EASTERN COUNTIES—(*con.*).

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SURREY—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
6.—THAMES—Wey—(*con.*).								
D **Witley (King Edward's School)**	E. Townsend, Esq.	5	1 0	300	..	24·21	150	103
D **Witley (King George V. Sanatm.)**	Dr. J. Watt	5	1 0	305	..	25·11	142	108
D Churt (Furze Hills)	Rev. C. G. O. Bond, M.A.	5	1 6	390	..	29·37	163	121
D Churt (Bron-y-dê)	Rt. Hon. D. Lloyd George	8	1 11	350	..	28·92	162	108
D Hascombe Place	C. T. Musgrave, Esq.	5	1 0	390	*33·5*	23·58	135	104
D Cranleigh (Ruffold Lodge)	R. H. Pearce, Esq.	5	1 3	..	..	22·44	153	112
D Godalming (Hascombe)	Mrs. Francis Howard	5	1 0	390	..	25·87	147	115
D Godalming (Hascombe Court)	Sir John Jarvis, Bt.	5	1 0	400	..	24·99	145	108
D Ewhurst (Coneyhurst)	Col. R. J. Few, D.S.O.	8	1 0	561	*33·7*	23·46	134	118
D Ewhurst (The Four Winds)	Miss E. Brooke	5	1 0	809	..	25·45	151	120
D Cranleigh (Winterfold House)	The Head Gardener	8	1 6	550	..	28·00	144	123
D Frensham (Spreakley Hollow)	A. R. Crossley, Esq.	5	1 0	200	..	27·57	147	100
d Godalming (Munstead Heath)	A. M. P. Hodsoll, Esq.	5	1 0	450	..	23·91	..	98
Godalming (Borough Rd. P.S.)	The Engineer and Manager	8	1 0	120	..	24·67	..	..
d Godalming (Greylees)	A. Ewan, Esq.	5	1 0	150	..	23·95	..	94
Godalming (Westbrook)	T. Turner, Esq.	5	1 0	280	..	23·84	..	..
D Godalming (Charterhouse)	O. H. Latter, Esq.	5	1 0	130	*29·2*	23·84	155	100
D Tilford (Brownholm)	J. King Esq.	5	1 3	300	..	26·27	175	108
D Shackleford (Hall Place)	Mr. E. Nash	8	1 2	200	..	25·76	155	110
d Peaslake (Dewdney)	Norman Temple, Esq.	5	1 0	532	..	25·87	..	..
Peaslake (Southcots)	H. M. Gregory, Esq.	5	1 0	420	..	27·57	150	115
D Bramley (Wood View)	Rev. C. J. Etty	5	1 0	135	..	25·46	138	116
D Abinger Hill School	B. R. Delap, Esq.	5	1 0	670	..	25·35	143	116
D Abinger Common (Goddards)	J. A. Gibbs, Esq.	5	1 0	586	..	24·77	161	113
Compton (Sandyknowe Gdns.) (A)	Mrs. F. Houghton	8	1 3	250	..	24·03	..	..
D Shere (Manor House)	R. A. Bray, Esq.	5	1 0	330	..	25·39	160	109
d Shere (The Rectory)	Rev. Sir P. M. Bowman, Bt.	5	1 3	200	..	26·03	..	109
d Albury (Dalton Hill Gardens)	Mr. J. Tidy	5	1 0	250	..	25·48	..	109
D Abinger Hall	Lord Farrer	8	1 0	360	*36·5*	28·06	178	123
D Shalford (The Hutch)	Capt. G. C. Pentland	5	1 4	170	..	21·22	145	105
D Farnham (Crooksbury Ridges)	F. R. Walters, Esq., M.D.	5	1 4	440	*31·0*	25·39	170	111
D Farnham (Short Heath Lodge)	Col. G. Chrystie	5	1 0	365	*30·1*	27·10	133	118
D Puttenham (Berthorpe)	Capt. E. H. Tuckwell, M.C.	5	1 0	350	..	26·28	153	107
D Guildford (Pilgrim Wood)	H. A. Powell, Esq., M.D.	5	1 0	320	..	22·34	142	95
D Guildford (Pewley Hill)	Miss H. S. Pitman	5	1 0	365	..	25·25	186	115
D Guildford (West Mount)	Miss M. E. Powell	5	1 0	220	..	23·30	151	106
d Guildford (Kilvington)	Miss Meynell	5	1 0	300	..	22·74	(154)	(97)
D Normandy (The Manor House)	E. S. Hose, Esq., C.M.G.	5	1 4	149	..	23·21	135	103
d Merrow (Stoodwell)	S. Eustace, Esq.	5	0 10	250	..	25·62	..	104
D East Clandon (Hatchlands)	F. A. Akers, Esq.	5	1 0	340	..	24·97	164	108
D West Clandon	W. Fidkin, Esq., C.E.	8	1 0	319	..	24·74	151	105
D Worplesdon (Tangley Place)	E. J. W. Jeudwine, Esq.	5	1 10	150	..	21·31	137	101
d Worplesdon (Golf Club)	The Secretary	5	1 6	168	..	22·74	..	101
D Send (Woodside)	G. M. Osborne, Esq.	8	0 10	146	..	22·34	147	113
d Sutton Green (Pyle Hill)	Capt. S. Price-Williams	5	1 6	140	..	21·29	..	97
D Woking (The Grange)	Miss M. E. Wilson	5	1 0	78	*26·1*	24·42	165	113
D Woking (Westfield)	Vernon B. Longhurst, Esq.	5	1 0	100	..	22·07	153	108
d Woking (Hook Heath)	W. S. Patterson, Esq.	5	1 0	160	..	20·75	..	102
D Woking (The Green)	Mrs. G. E. Howlett	5	0 9	122	..	22·55	148	102
d Brookwood (Sheets Heath)	Captain H. J. Cann	5	1 0	200	..	23·32	..	..
D Old Woking (Sewage Works)	Woking U.D.C.	5	0 6	76	..	24·44	139	101
Woking (Goldsworth)	Mrs. S. Slocock	5	1 4	110	..	21·05	..	..
D Woking (Goldsworth Rd. Depot)	Woking U.D.C.	5	2 6	96	..	20·85	141	100
D Horsell (The Vicarage)	Rev. Canon Norman Pares	5	1 1	140	..	19·30	141	91
D Byfleet (WISLEY R.H.S. Gdns.)	The Director	8	1 0	150	24·1	22·73	150	108
D Wisley (Outfall Works)	Woking U.D.C.	5	1 0	55	..	24·45	142	119
D West Byfleet (Kilmeena)	The Late F. Littleboy, Esq.	5	1 0	100	..	21·99	149	106
D **West Byfleet (Starcross)**	Walter W. Way, Esq.	5	1 0	110	..	21·62	140	108
D Weybridge (Harwood)	Lt.-Com. J. K. Elliott, R.N.	5	0 11	150	..	18·93	145	104
D **Weybridge (St. Michael's)**	H. I. Bond, Esq.	5	1 0	115	..	20·77	164	110
D **Weybridge (Heath Field)**	Miss A. T. Gardiner	5	1 0	100	..	20·65	142	101
D **Weybridge (Oil Mills)**	A. Whittet, Esq.	5	1 0	36	*24·1*	19·31	144	102

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SURREY—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
7.—THAMES—Bourne. 55 sq. mi.								
d Knap Hill (Ulundi)	G. C. H. Simmonds, Esq. ..	5	1 0	180	..	(22·72)	(160)	(112)
D Knap Hill Nurseries	Donald Waterer, Esq.	5	1 0	105	..	21·81	148	102
D Chobham (Sandpit Hall)	K. H. Power, Esq.	5	1 0	100	*26·7*	21·47	144	110
D Chobham (West End)	F. A. Walter, Esq.	5	1 0	150	..	22·31	172	115
d Bagshot (Charlton)	W. Perry, Esq.	5	0 10	215	..	24·55	..	108
d Bagshot	J. Waterer Sons &Crisp,Ltd.	5	1 0	265	..	24·81	..	103
D Chertsey (Ottershaw)	L. H. Seccombe, Esq.	5	1 0	200	..	20·81	141	111
D Windlesham (Windlesham Ho.)	R.Adml.A.Cochrane,C.M.G..	5	1 0	200	..	23·02	169	109
D Upper Childown (Long Cross H.)	Miss C.M.Leycester-Penrhyn	5	1 0	200	..	20·93	167	106
d Sunningdale (Hilltop)	E. F. Cecil, Esq.	5	1 0	280	..	20·69	..	95
D Chertsey (Abbey Meads)	W. Fidkin, Esq., C.E.	8	1 0	53	..	17·67	139	96
d Virginia Water (S. Ann's Heath)	H. Y. Summons, Esq.	8	1 1	120	*25·4*	19·46	..	96
D Egham (Kingswood Sch.)	The Rev. Mother Superior..	5	1 0	250	..	19·95	145	93
8.—THAMES—Lodden. 17 sq. mi.								
d Frimley Green Waterworks	S. G. Weller, Esq.	5	0 7	220	*24·6*	21·93	..	..
D Frimley Green (Ridgemount)	C. C. Haviland, Esq.	5	0 9	350	*29·1*	24·52	191	114
D Camberley (Way's End)	E. Ernest Green, Esq.	5	0 11	295	..	23·72	150	114
D Camberley (Cordwalles)	C. H. Ledward, Esq.	5	1 0	400	..	23·97	150	103
KENT. (Area, 1,532 sq. mi.)								
1.—ROTHER & C. 217 sq. mi.								
D DUNGENESS (Lighthouse)	Chief Officer R.N. Sig. Stn. (M.O.)	8	0 11	20	24·4	21·02	127	92
D Lydd (The Paddock)	Dr. J. A. Proctor.	5	1 0	10	..	22·93	144	99
d Lydd (Westbroke House)	A. G. Finn, Esq., J.P.	5	1 0	10	..	21·40	..	92
d Brookland (Thrift Farm)	C. Clark, Esq.	12	3 0	11	..	20·28	..	93
D Dymchurch (Grove House)	R. S. Jones, Esq.	5	1 0	8	..	21·46	143	97
d Dymchurch (Hoornes)	Mrs. Paddock.	5	1 0	9	..	21·01	..	..
D Appledore (The Well House)	Dr. F. W. Cock	5	1 0	23	..	20·90	128	94
D Hawkhurst (Moor House)	F. S. Springett, Esq.	5	1 0	208	..	21·51	131	97
D Hawkhurst (Hensill)	Mrs. F. Ross Thomson.	5	1 0	180	*30·5*	23·41	150	100
D Kenardington (The Firs)	Cmdr. F. H. Lyon, D.S.O...	5	1 2	65	..	20·37	135	93
D Tenterden (Ashenden)	Major Herbert Neve.	5	1 0	190	27·5	20·87	135	107
D Benenden (National Sanat'm)	H. Spurrier, Esq., M.B.	5	1 0	150	..	21·09	162	121
D Hythe	M. J. Harvey, Esq., C.E.	5	0 9	12	*28·0*	23·23	154	98
D Hythe (Douglas Avenue)	W. H. Elder, Esq.	5	1 9	33	..	21·58	136	95
D Hythe (Sandling Park)	Capt. A. E. Hardy	8	1 0	260	*30·4*	25·43	128	103
D Sandgate	J. A. Woodgate, Esq., C.E..	5	1 0	60	..	21·81	141	91
D Saltwood (Cylinder)	Miss M. Lethbridge	5	1 0	230	..	24·58	128	99
D Folkestone (Radnor Park West)	H. D. Seth-Smith, Esq.	5	1 0	90	..	23·88	126	106
D FOLKESTONE (Borough Sanat'm)	Borough Engineer	5	1 0	101	*28·6*	25·78	142	108
D Newington (The Grange)	Legh. S. Powell, Esq.	5	1 0	250	..	25·33	142	108
d Folkestone (Cherry Gardens)	The Engineer.	5	1 6	230	29·1	26·44	160	122
d Folkstone (Lower Standen)	The Engineer	5	2 11	250	..	24·49	..	96
D DOVER (Waterloo Crescent) (+A)	W. B. Smith, Esq., C.E.	8	1 0	22	..	25·02	146	103
D Dover (Waterworks)	W. B. Smith, Esq., C.E.	5	1 6	200	*30·0*	25·07	136	111
D Dover (Buckland)	Guy Mannering, Esq.	8	1 6	50	..	28·16	120	111
d Dover (Barton Road) (+A)	Cyril G. W. Lewis, Esq.	5	1 0	55	..	(26·64)	(142)	(111)
D Kearsney (Chilton Farm)	W. B. Smith, Esq.,C.E.	5	1 6	127	*33·5*	29·48	147	117
2.—STOUR & C. 386 sq. mi.								
D LYMPNE (Aerodrome) (+A)	Meteorologist-in-Charge	8	1 0	346	*28·5*	21·42	150	90
D Sellindge (Council School)	S. H. Serpell, Esq.	5	1 0	200	..	22·78	144	106
D Smeeth School	W. H. Wetherell, Esq.	5	1 0	300	..	22·12	157	112
D Lyminge (Elham Valley W.W.)	Phillip Harris, Esq	5	1 6	445	..	28·07	168	117
D Ashford (Gas Works)	L. G. Kimmins, Esq.	5	0 11	125	..	23·01	152	104
D Ashford	B. H. Headley, Esq.	5	1 0	190	..	24·27	166	111
D Ashford (Albert Road)	A. E. Brounger, Esq.	5	1 0	185	..	23·29	164	107
D Elham (Bladbean Farm)	Capt. T. L. Wall	5	0 9	459	..	25·20	129	117

DIVISION II—SOUTH-EASTERN COUNTIES—(*con.*).

	STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Aver-age Rain-fall.	1933. Rain-fall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
	KENT—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
	2.—STOUR & C.—(*con.*).								
D	Dover (Martin Mill Pump. Stat.)	F. L. Ball, Esq.	5	1 0	287	..	24·64	140	105
D	Elham (Domel)	J. Hill, Esq.	5	1 6	459	..	24·96	133	109
D	Wye (Agricultural College)	S.E. Agric. College	5	1 0	164	..	22·83	149	114
D	Waldershare Rectory	Rev. H. Saumarez Smith	5	1 0	275	..	25·89	155	115
D	Waldershare Park Gardens	J. Haggett, Esq.	8	1 0	250	*33·2*	25·49	134	108
D	Shepherdswell (Upton Lodge)	Rutley Mowll, Esq.	5	1 0	300	..	25·84	148	109
D	Boughton Aluph (Fairlawn)	E. Simmons, Esq.	5	1 3	220	..	21·71	150	105
D	Charing Pumping Station	F. L. Ball, Esq.	5	1 0	295	..	22·86	160	107
D	Charing (Pett Place) *new g*	Brig.-Gen. T. M. S. Pitt	5	1 0	350	..	23·95	154	114
D	Deal and Walmer W.W.	W. Mantle, Esq.	5	1 0	110	*28·0*	22·77	140	105
D	Barham (Old House)	L. S. Osmaston, Esq.	5	0 9	175	..	22·25	147	106
D	Barham Pumping Station	F. L. Ball, Esq.	5	..	173	..	22·04	141	104
D	Deal (Wellington Road)	The Town Clerk	5	1 0	25	..	21·48	131	106
D	Worth (Upton House)	Capt. W. Elwin Napier	5	1 0	32	*27·7*	24·48	136	108
D	Worth (Felder Lodge)	J. S. Campbell, Esq.	5	0 10	26	..	21·62	146	104
D	Wingham (Margate W.W.)	Mr. J. H. Parker	5	1 0	138	*28·7*	21·18	150	106
D	Chilham (Lower Ensden)	F. Ivo Neame, Esq.	5	3 0	305	..	17·94	128	102
D	Wingham Boys' School	The Headmaster	5	1 0	50	..	19·51	138	100
D	Canterbury (Medical Hall)	A. Lander, Esq.	5	1 0	124	..	17·17	137	90
D	Canterbury (London Road)	Miss B. Spillett	5	1 0	66	*28·7*	18·84	145	100
D	Canterbury (Irrigation Works)	C. Terry, Esq., C.E.	5	2 6	15	*27·5*	19·34	163	106
d	Canterbury (Rough Common)	R. W. Wood, Esq.	5	1 0	285	..	20·50	..	98
D	Ramsgate (East Cliff) (+A)	Borough Engineer	8	1 0	80	*24·0*	19·38	147	90
D	Ramsgate (Archer House)	Miss E. F. Baker	5	1 0	75	..	18·90	134	96
d	Birchington (Acol Farm)	C. S. Willett, Esq.	5	2 3	30	..	18·33	138	..
D	Reculver	Allington Collard, Esq.	5	5 2	27	*21·8*	16·61	130	95
d	Broadstairs (Domus)	Capt. W. B. Marling	8	1 0	60	..	19·82	..	93
D	Broadstairs (Collis Court Road)	A. Watkins, Esq.	5	1 0	120	..	21·60	152	104
D	St. Peter's (Hildersham House)	The Surveyor	5	0 9	145	23·7	23·90?	146	116
d	Birchington (Hollydene)	W. Tomlin, Esq., Junr.	5	6 0	75	..	17·32	..	87
D	Margate (Cliftonville)	The Town Clerk	5	1 0	51	22·8	17·67	124	86
	3.—SWALE & C. 167 sq. mi.								
d	Selling (Grove House)	F. Ivo Neame, Esq.	5	1 5	330	..	18·50	(142)	(97)
D	Selling (Luton)	F. Ivo Neame, Esq.	5	4 9	300	*30·4*	20·35	163	107
D	Sittingbourne (Torry Hill)	D. Leigh Pemberton, Esq.	5	1 0	497	..	21·37	156	114
D	Faversham (Water Wks.)	The Engineer & Manager	5	1 6	130	..	18·52	139	106
d	Ospringe (Queen Court)	L. H. Finn, Esq.	8	1 3	50	..	18·97	..	93
D	Ospringe (Lorenden)	L. H. Finn, Esq.	5	1 6	175	..	18·50	134	97
D	Faversham (Portway)	C. Gordon Neame, Esq.	5	3 6	180	..	18·33	129	105
d	Graveney Court	G. W. Finn & Sons	8	4 3	45	..	15·75	..	..
	Teynham (Norton Court)	A. L. Mercer, Esq.	5	1 6	90	..	18·24	129	99
D	Teynham (New Gardens)	Mrs. Honeyball	5	1 5	30	*24·5*	16·16	136	87
d	Milton Regis (Sewage Works)	Sittingbourne U.D.C.	5	1 1	19	..	16·69	..	94
	Herne Bay (Waterworks)	J. Roberts, Esq.	5	1 0	130	*22·8*	16·39	..	..
D	Herne Bay (Memorial Park)	The Surveyor	5	1 0	14	..	14·82	128	87
d	Sheppey (Eastchurch Parsonage)	H. C. Warren, Esq.	5	1 0	100	*22·9*	16·38	..	..
D	Sheerness	Dr. W. C. D. Hills	5	1 0	9	..	16·46	126	87
	4.—MEDWAY. 506 sq. mi.								
D	Bedgebury Park Gardens	Mr. H. Arnold	5	1 0	280	..	24·92	127	110
D	Kilndown School	J. A. Ager, Esq.	5	1 3	365	..	23·31	145	118
D	Scotney Castle	E. W. Hussey, Esq.	5	3 9	203	*26·8*	20·89	148	99
D	Cranbrook (Little Glassenbury)	J. I. Stirling, Esq.	5	0 10	360	..	25·39	153	108
d	High Halden (Middle Quarter)	Mrs. J. E. Budding	5	1 0	114	..	(20·29)	..	92
D	Goudhurst (Gore Court)	J. A. Druce, Esq.	5	1 0	197	*30·3*	21·64	126	96
D	Tunbridge Wells (Hawkenbury)	D. W. Horner, Esq.	5	1 6	435	..	23·69	154	116
D	Tunbridge Wells (Rustall Grange)	The late A. G. Robins, Esq.	5	1 0	440	..	24·04	145	108
	Tunbridge Wells (Langton Green)	Miss E. M. Pott	5	1 0	420	..	24·39	159	120
D	Tunbridge Wells (Calverley Pk.)	Medical Officer of Health	5	1 0	351	..	22·19	147	107
D	Tun. Wells (The White House)	Miss Monica G. Robins	5	1 6	350	..	24·40	141	123

DIVISION II—SOUTH-EASTERN COUNTIES—(*con.*).

STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
KENT—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
4.—MEDWAY—(*con.*).								
D Tunbridge Wells (Sherwood Pk.)	The Head Gardener	5	1 0	500	..	22·48	137	107
D Matfield (Kings Mead)	Henry Hills, Esq.	5	1 6	390	..	22·66	135	105
D Brenchley (The Warren)	Dr. Carl Langer	5	0 6	270	..	23·61	149	113
D Speldhurst Rectory	Rev. Canon H. Masters	5	0 10	334	..	23·98	134	114
D Pembury (The Spring)	Miss A. P. Fowler	5	1 0	416	..	24·39	156	125
D Pembury Waterworks	H. P. Bishop, Esq., C.E.	8	1 8	197	..	23·04	143	111
D Markbeech (Edells)	Miss M. F. Pearse	5	1 0	320	..	22·64	157	111
D Edenbridge (Falconhurst)	Hon. Mr. Justice Talbot	5	1 6	375	30·7	24·49	153	116
D Edenbridge (Stonewall Pk.)	The late E. G. B. Meade-Waldo, Esq.	5	1 1	344	..	21·60	146	113
D Edenbridge (Gilridge)	J. Mavrogordato, Esq.	5	1 0	400	..	23·89	150	114
D Edenbridge (Hever Castle)	Mr. A. McCutcheon	5	1 0	200	..	22·38	143	112
D Headcorn (Upalong)	R. S. Hartree, Esq.	5	1 3	100	..	19·98	131	96
d Pluckley (Brick Works)	Guy G. Davies, Esq.	5	1 6	112	..	20·46	(164)	(102)
D Penshurst Place	Lord De L'Isle and Dudley	5	1 6	120	..	24·27	172	112
D Penshurst (Parkholt)	J. M. Sturgess, Esq.	5	0 9	265	..	22·32	132	107
D Tonbridge (Mabledon Park)	J. F. W. Deacon, Esq.	5	1 6	190	..	21·61	141	104
D Tonbridge (Ingleside)	A. H. Neve, Esq.	5	1 1	160	..	22·37	149	112
D Tonbridge (Thorpe Avenue)	F. J. Reed, Esq.	5	1 0	150	..	20·56	131	97
D Hildenborough (Gailes)	E. E. Roper, Esq.	5	1 0	159	..	21·24	142	102
D Hildenborough (Hollanden Ho.)	C. H. Scott, Esq.	8	1 0	99	..	21·47	158	101
D East Peckham (Woodbine)†	W. H. Pearson, Esq.	8	1 0	48	..	21·14	141	108
D Langley (Rumwood Court)	Mr. W. J. Gould	5	1 9	354	..	20·70	157	101
d Harrietsham (Dun Akyune)	C. Mackinnon, Esq.	5	1 4	400	..	24·03	..	110
D Lenham	D. F. Tysoe, Esq.	5	1 6	400	..	23·58	146	113
D Nettlestead (Old Quarry)	W. Pye-English, Esq.	5	1 0	286	..	20·92	149	111
D Otham (Synyards)	Ambrose Boyson, Esq.	5	1 0	315	..	22·41	170	122
D Sevenoaks (River Hill) *new g*	Lt.-Col. J. M. Rogers, D.S.O.	5	1 0	500	30·0	22·34	149	124
D Hollingbourne (Penn Court)	S. Lucy, Esq.	5	1 1	261	..	20·66	147	118
D Maidstone W. W. (Barming)	C. H. Harden, Esq., C.E.	5	1 4	245	..	20·63	139	104
D Wrotham Heath (Huntsman's Ldge)	G. B. Kershaw, Esq.	5	1 9	284	..	23·23	152	117
D Maidstone (Mill Street)	T. F. Bunting, Esq.	8	6 0	37	..	21·44	154	106
D Maidstone (Brenchley Gardens)	T. F. Bunting, Esq.	5	0 9	49	..	22·71	144	105
D East Malling (Belvidere)	O.I.L. Bird, Esq.	5	1 9	250	..	21·62	140	111
D East Malling (Research Station)	The Principal	8	1 0	127	..	21·34	140	110
Maidstone (Allington Lock)	Mr. W. Smith	5	1 0	20	..	21·26	135	102
D Aylesford (Forstal P. Stn.)	C. H. Harden, Esq., C.E.	5	1 0	20	..	19·47	141	99
D Detling (The Croft) *new g*	R. Cooke, Esq.	5	1 0	330	*27·8*	22·75	178	113
D Trosley Pumping Station	F. L. Ball, Esq.	5	1 8	250	..	22·70	145	110
D Maidstone W.W. (Boxley)	C. H. Harden, Esq., C.E.	5	1 0	286	..	21·38	148	107
D Chatham (Woolmans Wood)	W. Coles Finch, Esq., C.E.	5	3 0	470	..	21·42	133	99
d Halling Pumping Station	F. L. Ball, Esq.	5	1 0	75	..	19·62	..	109
D Chatham (Luton W.W.)	W. Coles Finch, Esq., C.E.	5	3 0	88	..	18·76	139	102
D Rainham (Motney Hill)	J. B. Harvey, Esq.	5	1 0	28	..	16·73	129	87
D Rochester (Deanery Gate)	Warwick Stunt, Esq.	5	1 0	50	..	18·37	139	91
D Strood Waterworks (+A)	W. Law, Esq., C.E.	5	1 0	112	..	18·60	148	95
d Stoke	Rev. A. E. Ottaway	5	0 10	80	..	17·45	..	..
5.—THAMES—Darent & c. 256 sq. mi.								
d Westerham Town	Met. Water Board	5	1 0	380	..	23·68	(168)	(121)
D Westerham Hill Pumping Stat.	Met. Water Board	5	1 0	539	..	23·10	178	119
D Sundridge Rectory	Rev. C. C. Gosselin	5	1 0	280	..	22·83	153	125
D Sundridge Pumping Stn.	Met. Water Board	5	1 0	270	..	22·90	153	123
M Sevenoaks (Tonbridge Rd. Res.)	F. Vallins, Esq.	5	1 6	556	..	22·13	..	..
D Sevenoaks (Speldhurst Close)	H. A. Fraser, Esq.	5	1 0	470	..	21·17	160	125
D Sevenoaks (Knole Park)	E. Stubbs, Esq.	5	1 0	500	..	23·87	157	120
d Tatsfield (Betsoms Hill)	Met. Water Board	5	1 0	820	..	24·10	(173)	(124)
M Seal (Oak Bank Reservoir)	F. Vallins, Esq.	8	1 0	550	..	23·50	..	..

† Formerly called "Central Stores."

DIVISION II—SOUTH-EASTERN COUNTIES—(*con.*).

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	KENT—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
	5.—THAMES—Darent & c.—(*con.*).								
M	Seal (St. Lawrence Reservoir)	F. Vallins, Esq.	8	1 0	665	..	23·79	..	..
M	Seal (Kemsing Pumping Stat.)	F. Vallins, Esq.	5	1 0	292	..	22·89	..	..
D	Sevenoaks (Chevening Gardens)	Mr. J. C. Sutton	5	1 0	360	..	24·62	170	122
d	Knockholt (Kent Waterworks)	Met. Water Board	5	1 0	785	*29·9*	25·65	(178)	(130)
D	Biggin Hill (Aerodrome)	Assistant-in-Charge	8	1 0	567	31·4	22·16	166	113
d	Fairseat (Fairseat House)	Col. W. Pitt, C.M.G.	5	1 0	670	..	25·31	..	110
D	Chelsfield (Hewitts)	W. A. Waring, Esq.	5	4 0	476	..	19·71	152	105
d	West Wickham (Oak Lodge)	D. Schove, Esq., B.Sc.	5	1 0	200	..	18·91	(138)	(101)
D	Eynsford Pumping Station	Met. Water Board	5	1 0	100	..	18·83	134	98
D	Eynsford Hill	Arthur Mee, Esq.	5	1 0	358	..	19·91	159	106
D	Orpington (Kent Waterworks)	Met. Water Board	5	1 0	220	..	19·99	149	111
d	W. Wickham (Woodland Way)	D. A. Worthington, Esq.	5	0 9	325	..	20·05	(164)	(112)
	Crockenhill (Wested Farm)	A. T. Miller, Esq.	5	1 6	331	..	18·53	..	..
D	Cobham (Crossways)	Miss F. H. Pye	5	3 0	320	..	23·07	143	113
D	Bickley (Farrants)	Miss Chalmers	5	1 2	250	25·9	19·47	136	109
	Bromley (Sundridge Avenue)	Dr. H. Wynne Thomas	5	1 0	200	24·7	17·18	..	..
D	Bromley	Borough Engineer	5	1 0	213	24·2	16·77	141	103
D	Beckenham (Croydon Rd.)	The Surveyor	8	1 0	110	..	18·05	135	106
d	Penge (Recreation Ground)	H. W. Longdin, Esq., C.E.	5	1 1	122	24·6	18·12	..	103
d	Anerley (Oakfield Road)	Miss S. Stannard	5	1 5	..	..	17·11	..	98
D	Chislehurst (Hawkwood)	Miss M. C. Edlmann	5	1 0	300	..	16·35	137	98
	Chislehurst (Holbrook Lane)	W. P. Jones, Esq.	5	1 0	325	25·1	18·21	..	..
D	Chislehurst (Scadbury Park)	Mr. B. Orchard	5	1 0	250	24·6	16·53	147	111
d	Swanley (Horticultural College)	The Principal	5	1 0	155	..	16·43	..	103
D	Southfleet (Hook Place Farm)	J. Barker, Esq.	5	0 8	100	..	17·65	126	102
D	Southfleet (Kent Waterworks)	Met. Water Board	5	1 0	82	..	17·31	135	93
D	Wilmington (Kent Waterworks)	Met. Water Board	5	1 0	25	..	16·83	142	101
d	Dartford (West Hill)	Mr. J. Taylor	5	1 3	100	..	17·02	..	93
D	Dartford (Tower Road)	C. O. Hunt, Esq.	5	0 6	125	..	15·89	139	97
D	Stone (City of Lond. Ment. Hosp.)	A. W. Fletcher, Esq.	5	1 0	115	..	16·59	131	99
d	Dartford (Sewage Works)	The Resident Engineer	5	1 0	14	..	17·02	134	96
D	Erith Sanatorium	Erith U.D.C.	5	1 0	182	..	16·22	131	87
D	Erith (Sewage Works)	Erith U.D.C.	5	1 0	13	..	14·84	128	95
D	Erith (St. Joseph's Convent)	Erith U.D.C.	5	1 0	213	..	17·25	128	105
D	Higham Waterworks	C. H. Clark, Esq.	8	1 0	141	..	19·68	151	94
D	Erith (Crossness)	London County Council	14	0 6	16	20·8	14·31	134	96
	SUSSEX. (Area, 1,458 sq. mi.)								
	1.—LAVANT & C. 175 sq. mi.								
D	Aldwick (Greenways)	D. S. Hancock, Esq.	5	1 0	25	..	22·27	127	95
D	Bognor Regis (Waterloo Square)	The Town Clerk	8	1 0	24	25·9	22·85	128	98
D	Bognor Regis (Albert Road)	W. L. Guermonprez, Esq.	8	1 0	17	..	21·66	146	98
D	North Mundham Vicarage	Rev. A. F. H. Outram	5	0 9	0	..	25·49	147	105
d	Merston (Abelands)	Miss V. Kennard	5	0 6	24	..	23·39	..	99
D	Bosham (Cobnor)	Major S. W. P. Beale	5	1 0	12	..	24·83	132	89
D	Barnham (Downview Road)	Mrs. A. C. Bisset	5	1 0	20	..	24·29	129	103
D	Chichester (Kingsham Farm) (R)	W. Lawson, Esq.	8	0 10	35	..	24·37	158	92
D	Chichester (Westgate)	The late G. Ashley Tyacke, Esq.	8	1 0	40	28·7	23·90	132	92
d	Chichester (West Street)	Dr. W. Dick	5	1 0	40	..	21·77	..	84
D	Chichester (County Hall)	Stanley Morris, Esq.	5	1 0	45	..	24·08	135	88
d	Chichester (Oakwood House)	Mrs. Baring Du Pre	5	1 0	101	..	23·83	..	94
D	Funtington House	J. A. Greenwood, Esq.	5	1 0	95	..	23·83	122	95
D	Lavant	Miss J. F. Paxton	5	1 0	100	..	23·67	121	92
D	Chichester (Goodwood Gardens)	Duke of Richmond&Gordon	5	1 3	133	..	25·69	163	105
D	Emsworth (Stansted Park)	Earl of Bessborough	5	2 6	140	..	26·92	191	103
D	Emsworth (Watergate House)	W. M. Christy, Esq.	5	1 0	222	..	27·58	129	102
D	West Dean Park	W. A. Mackenzie, Esq.	5	1 0	190	..	29·15	126	110
D	Chilgrove House	E. L. Woods, Esq.	5	1 0	266	..	27·88	133	98
D	Compton (Compton House)	Miss K. B. Langdale	5	1 0	263	36·6	29·25	139	106

DIVISION II—SOUTH-EASTERN COUNTIES—(*con.*).

STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
SUSSEX—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
2.—ARUN. 285 sq. mi.								
D LITTLEHAMPTON (Met. Station)	The Town Clerk	5	1 0	15	..	22·89	129	102
D Rustington (Bracondale Nurs.)	J. Muir, Esq.	5	0 10	30	..	23·54	120	105
D Lyminster Vicarage	Rev. Dr. S. P. Duval	5	1 0	20	..	22·10	135	105
D Arundel (Cross Bush)	Miss M. Orme	5	1 3	125	..	23·25	154	105
D Patching Farm	Michael Drewitt, Esq.	5	1 0	180	30·8	25·45	126	102
D Arundel Castle	The Duke of Norfolk	5	1 0	106	..	24·29	135	108
d Arundel (Houghton)	C. P. Gates, Esq.	5	1 0	60	..	26·62	(170)	(107)
Harting (Down Place)	R. G. Blackwell, Esq.	5	1 2	401	..	28·32	122	98
D Storrington (Badgercroft)	P. Herington, Esq.	5	0 6	250	..	29·01	139	109
D Storrington Rectory	Mrs. Faithfull	5	1 1	..	..	25·28	130	103
Bignor	Major G. B. Hill	5	1 0	175	..	28·68	..	..
D Pulborough (Parham)	Hon. Clive Pearson	5	.	98	..	26·07	129	99
Pulborough (Nutbourne)	Mrs. Burney Young	5	1 4	100	..	24·81	..	..
D Pulborough (Codmore Hill)	Rev. C. Ash	5	2 0	165	..	24·85	164	115
Fittleworth Rectory	Rev. A. C. Lucey	5	1 9	135	..	24·02	139	109
d Petworth Park Gardens	Lord Leconfield	5	1 0	182	..	25·35	..	103
D Tillington (Westmoor)	Mrs. Randall	5	1 0	200	..	25·98	148	110
D Midhurst (Fairview)	Miss P. Eames	5	1 0	..	..	30·03	131	100
D Billingshurst (The Nook)	Chas. F. Rilot, Esq.	5	1 0	120	..	23·25	122	110
Rogate	Mrs. Kennion	5	1 0	500	..	(32·94)	..	..
D Kirdford (Brownings)	B. de. F. Osmaston, Esq.	5	2 0	100	..	24·62	137	115
D Kirdford (Hills Green)	L. Baker, Esq.	5	1 0	150	..	21·90	129	95
D Liss (Hill Brow)	F. W. Beckford, Esq.	5	1 0	488	..	31·64	160	110
D Horsham (Whites Bridge)	C. G. A. Atkinson, Esq.	5	1 0	139	..	22·56	144	115
D Lower Beeding (The Warren)	Leicester M. Reed, Esq.	5	0 10	430	..	24·24	141	114
D Horsham (Christ's Hospital)	Major Gabriel Green, M.C.	8	1 3	160	..	19·48	131	105
D Horsham (Tower Hill)	C. Marsh, Esq.	5	1 0	220	..	21·19	142	106
D Horsham (Sewage P.S.)	C. G. Atkinson, Esq.	8	1 0	118	..	23·00	147	115
D Horsham (Wimblehurst)	Miss E. M. Allcard	5	1 0	195	30·0	21·54	142	112
Horsham (Dunedin)	A. C. Holland, Esq.	5	1 0	220	..	22·10	..	..
D Rusper (The Nunnery)	Sir Cecil J.B. Hurst, G.C.M.G.	5	1 6	260	..	24·49	154	119
3.—ADUR & C. 237 sq. mi.								
d Peacehaven	Commander W. S. Davenport	5	1 0	119	..	21·37	..	97
D Rottingdean School	Mr. T. A. Sandalls	5	1 0	120	..	22·13	146	105
D Rottingdean (Hillside)	Admiral H. J.L. Clarke, C.B.E.	5	1 0	60	..	21·32	132	101
D WORTHING (Beech House Pk.) (+A)	Medical Officer of Health	8	1 0	25	27·5	20·40	125	92
D BRIGHTON (Old Steyne)	Medical Officer of Health	5	1 0	32	28·1	20·78	129	98
D Portslade (Midways)	E. C. Smith, Esq.	5	1 0	30	..	22·06	128	98
D Hove	Medical Officer of Health	5	1 6	27	..	21·50	128	93
D Hove (Park House)	Guy Michell, Esq.	5	1 0	120	..	23·89	143	110
D Hove (Old Shoreham Rd.)	Chas. Modlen, Esq.	5	0 11	145	..	23·96	136	108
D Brighton (Dyke Road)	R. A. Penney, Esq.	5	1 0	240	..	22·63	134	107
D Lancing College	The Headmaster	5	1 0	120	..	21·45	130	105
D Brighton W. W. (Goldstone Bot.)	A. B. Cathcart, Esq., C.E.	8	1 0	142	..	21·56	144	103
D Brighton W.W. (Lewes Road)	A. B. Cathcart, Esq., C.E.	8	3 10	140	29·9	24·79	146	116
D Brighton W.W. (Shoreham)	A. B. Cathcart, Esq., C.E.	8	1 8	12	..	23·61	147	105
D Brighton W.W. (Mile Oak)	A. B. Cathcart, Esq., C.E.	8	1 3	166	..	23·43	145	109
D Brighton W.W. (Race Hill Res.)	A. B. Cathcart, Esq., C.E.	8	1 3	469	..	24·85	146	114
D Falmer (Brighton W.W.)	A. B. Cathcart, Esq., C.E.	8	1 4	202	..	25·20	154	116
D Patcham (Brighton W.W.)	A. B. Cathcart, Esq., C.E.	5	1 1	206	..	24·50	148	115
D Bramber (Burletts)	Hatton G. Sugden, Esq.	5	1 0	75	..	25·19	159	118
D Washington Vicarage	Rev. A. H. S. Pattrick	5	1 0	251	..	27·95	147	110
D Ditchling (Neston)	J. Brown, Esq.	5	1 1	170	..	26·90	147	125
D Hassocks (Wilmington Lodge)	C. T. Agar, Esq.	5	1 0	200	..	25·53	139	115
D Hassocks (The Croft)	Harold Taylor, Esq.	5	1 0	200	..	26·70	142	117
D Keymer	J. Francis Jupp, Esq., C.E.	5	1 0	..	..	26·67	126	117
D Henfield (Park House)	Miss H. Dixon Brown	5	0 8	100	..	23·71	131	111
D West Grinstead (Danefold)	Miss T. Gaisford	5	1 0	130	..	21·76	131	109
D Coolham	C. E. Cleeves, Esq.	5	1 0	80	..	22·41	130	105
D Billingshurst (Duncan's Farm)	Miss Edith Beck	5	1 0	130	..	25·19	146	125
D Slinfold (Elmhurst Farm)	Elmhurst Fmg. & Trdg. Co.	5	0 10	200	..	24·64	145	124

DIVISION II—SOUTH-EASTERN COUNTIES—(*con.*).

	STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Rain-gauge: Aver-age Rain-fall.	1933. Rain-fall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
	SUSSEX—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
	4.—OUSE.—224 sq. mi.								
D	Seaford (Bowden Ho. School)	J. F. Thomas, Esq	5	1 0	190	..	19·87	136	101
D	Seaford (Newlands)	T. Davys Manning, Esq.	5	1 0	100	..	21·46	135	(95)
D	Seaford (Southdown School)	C. W. Perfect, Esq.	5	1 6	120	..	20·30	134	106
D	SEAFORD	The Surveyor	5	1 0	45	..	19·31	133	98
D	Newhaven (Poverty Bottom W.W.)	F. B. Lumsden, Esq.	8	1 0	51	..	21·66	142	111
d	Lewes (Littledene)	Mr. J R. Howard	8	1 0	58	..	24·72	..	96
D	Lewes W. W. (Kingston)	J. T. P. Johnston, Esq.	8	1 3	13	..	26·36	164	114
D	Barcombe (The Gables)	L. S. F. Woodhead, Esq.	8	1 0	100	..	25·43	142	96
d	East Hoathly (Halland Park)	R. Shanks, Esq.	5	1 6	250	..	23·78	..	99
	Framfield (High Cross)	Maj. R. L. Thornton, C.B.E.	5	1 0	195	..	22·84	..	..
d	Uckfield House	Major G. Larnach-Nevill	5	1 0	150	..	22·07	..	..
d	Haywards H. (Abbots Leigh)	C. Hales, Esq., J.P.	.	..	200	..	22·45	..	95
D	Haywards H. (Paddockhall Rd.)	L. E. Hervey, Esq.	5	1 0	260	..	23·88	150	116
	Buxted (Strawberry Hall)	C. Rintoul, Esq.	5	1 0	180	..	24·70	154	..
D	Mayfield (Five Ashes)	Miss Emily Aston	5	1 1	300	..	22·77	156	105
D	Lindfield (The Common)	R. H. Robertson, Esq.	5	1 6	250	..	24·05	152	120
D	Uckfield (Fairwarp)	Col. A. E. Barchard	5	0 10	475	..	25·87	143	123
D	Oldlands Hall (R)	Sir B. Eckstein, Bart.	8	3 0	400	..	26·96	150	112
D	Horsted Keynes (Holy Well P.S.)	F. Martin, Esq., C.E.	8	1 9	124	..	23·65	125	113
D	Ardingly (Lywood House)	G. Forrester Scott, Esq.	5	0 9	240	..	23·86	156	114
D	ARDINGLY (Wakehurst Place)	Rt. Hon. Lord Wakehurst	8	1 9	437	..	26·39	156	115
D	Horsted Keynes (Birchgrove)	Miss G. C. Price-Davies	5	1 0	400	..	25·51	175	117
D	Balcombe (Lullings)	Mrs. M. Holland	5	1 0	348	..	26·66	153	119
D	Balcombe (The Gables)	Mr. G. J. Warren	8	1 3	358	..	27·52	156	134
D	Balcombe (Stockcroft)	Dr. R. Newton	5	1 1	341	..	25·49	152	129
D	Balcombe (Waterworks)	F. Martin, Esq., C.E.	8	1 0	467	..	25·10	141	122
D	Balcombe (Highley Manor)	Mr. B. T. Brooks	8	1 6	420	..	25·84	159	127
D	West Hoathly (Stonelands)	J. Godwin King, Esq.	5	1 0	450	..	26·13	137	109
	5.—CUCKMERE & C. 189 sq. mi.								
D	BEACHY HEAD (C. Guard Stn.)	The Chief Officer (M.O.)	8	1 0	502	..	25·25	144	104
D	Eastbourne (West Lodge)	Miss E. K. Beauford	5	1 0	120	..	23·40	139	106
D	EASTBOURNE (Wilmington Sq.)	Medical Officer of Health	5	1 0	35	30·7	23·45	139	104
D	Eastbourne (Motcombe Gdns.) (A)	Major L. Roseveare, C.E.	11	1 7	59	..	24·22	135	107
D	Eastbourne (Arundel Road)	Miss G. J Woodd	8	1 6	86	..	23·49	131	104
D	Friston	Eastbourne W.W.	8	1 0	104	..	23·43	144	110
D	Jevington	Eastbourne W.W.	8	1 0	274	..	25·52	131	118
d	Litlington	Eastbourne W.W.	8	1 0	19	..	22·39	..	103
D	Willingdon Sewage Farm	R. W. Fovargue, Esq.	5	1 0	24	..	24·50	134	112
D	Pevensey Pumping Station	R. W. Fovargue, Esq.	5	1 0	12	..	21·97	139	104
D	Pevensey Bay Pumping Station	R. W. Fovargue, Esq.	5	1 0	7	..	22·01	133	102
D	BEXHILL (EGERTON PARK)	The Boro' Council (H. J. Sargent)	8	1 0	12	..	21·87	131	103
D	ST. LEONARDS (Gensing Gardens)	The Town Clerk	8	1 0	178	28·4	24·06	162	103
D	St. Leonards (Thorndene)	Miss A. E. Tait	5	1 0	190	..	24·52	149	106
D	Hailsham (North Street)	R. Matthews, Esq.	5	1 0	105	..	21·77	149	103
D	Hailsham (Magham Down)	E. M. Bear, Esq.	5	1 0	90	..	20·34	138	101
D	Hazards Green (Pumping Station)	Bexhill W.W.	5	1 7	74	..	21·12	144	105
d	Hastings (Beechwood)	N. Lang Smith, Esq.	8	1 0	128	..	(23·09)	(146)	(100)
D	Hastings (Newgate)	S. Little, Esq., C.E.	8	1 0	240	..	21·68	141	97
D	Hastings (Clive Vale)	A. E. Moon, Esq.	5	1 0	328	..	23·18	153	103
D	Hastings (Halton Reservoir)	S. Little, Esq., C.E.	5	1 0	179	..	24·20	134	103
D	Hastings (Fairlight Reservoir)	S. Little, Esq., C.E.	5	1 0	500	..	24·30	136	107
D	Hollington (High Beech Gdns.)	R. H. Crockford, Esq.	5	1 0	400	..	22·90	151	109
D	Battle (Forewood W.W.)	S. Little, Esq., C.E.	5	1 0	30	..	22·17	127	97
D	Cowbeech (Pumping Station)	Bexhill W.W.	5	1 7	100	..	20·56	130	99
D	Horeham Road (Coxlow)	Miss P. C. Harrison	5	1 0	260	*32·2*	22·85	155	100
D	Horeham Rd. (Hollycroft Cott.)	J. Hamlin, Esq.	5	1 0	300	*35·2*	25·38	145	112
D	Horeham Road (Holmwood)	Rev. G. T. Maw	5	1 0	380	..	20·92	138	111
D	Heathfield (The White Cottage)	J. F. Leigh Clare, Esq.	5	1 0	500	..	23·95	158	114
	6.—ROTHER. 194 sq. mi.								
d	Hastings (Fairlight, Machico)	P. G. Lock, Esq. M.A., M.R.C.S.	5	1 0	125	..	22·88	(145)	(103)
D	Battle (The White Cottage)	Rev. E. J. Morgan	5	1 0	320	..	23·93	155	107
D	Battle (Netherfield)	Thos. W. C. Terry, Esq.	5	1 0	420	..	24·27	156	109
d	Udimore (The Wick)	Major R. P. Mair	8	1 0	92	*28·7*	23·16	..	92
D	Rye (The Point)	W. Gay, Esq.	5	1 0	120	..	24·07	144	110

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SUSSEX—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
6.—ROTHER—(*con.*).								
D Brightling Park	T. P. Tew, Esq.	5	1 0	545	..	25·19	162	109
Robertsbridge (Darvell Hall San.)	Medical Superintendent	5	3 0	100	..	20·66	..	..
D Peasmarsh (Woodside)	A. W. Rickards, Esq.	5	0 8	100	..	23·98	137	106
d Rye (Iden)	Admiral Sir Aubrey Smith	5	1 0	150	..	21·09	..	97
d Heathfield (Barklye)	W. H. Masson, Esq.	5	1 0	500	32·5	27·45	..	124
D Northiam (Great Dixter)	The late N. Lloyd, Esq., O.B.E.	8	1 0	209	..	22·71	148	105
D Ticehurst (Stonegate)	W. J. Wheeler, Esq.	5	1 0	230	..	24·97	169	115
7.—MEDWAY. 117 sq. mi.								
D Rotherfield (Horsegrove Fm.)	F. W. Shaw, Esq.	5	1 0	528	..	25·90	157	122
d Rotherfield (Roslyn)	The late Rev. H. C. B. Foyster	5	1 2	520	..	28·22	..	132
D Crowborough (Jarvis Brook)	Crowborough Water Co.	5	1 0	325	..	25·37	140	116
D Crowborough (Uckfield Lodge)	Mrs. Driberg	8	1 0	796	36·0	26·48	151	119
D Crowborough (Beacon School)	R. W. Hunt, Esq.	5	1 3	750	..	27·52	163	121
D Crowborough (Beaconstone)	A. K. Gordon, Esq.	5	0 6	794	..	25·56	158	119
d Crowborough (The Beacon)	A. R. Allcroft, Esq.	5	1 0	798	..	27·49	..	117
D Wadhurst (Lower Cousley Wd.)	A. Wilkin, Esq.	5	1 0	416	..	22·08	151	111
d Forest Row (Wych Cross Place)	The late D. W. Freshfield, Esq., D.C.L.	5	1 0	600	..	24·67	..	..
D Forest Row (Hindleap Lodge)	Mr. A. Adam	5	1 6	620	..	26·52	139	120
Forest Row (Charlwood Farm)	A. Hoare, Esq.	5	2 0	350	..	27·73	130	..
D Forest Row (Wirksworth)	L. Gibbs, Esq.	5	1 0	217	..	24·46	148	116
D Frant (Hazelhurst)	W. S. Darlington, Esq.	5	1 0	450	..	23·91	138	113
D Frant (Henley House)	Rev. E. Malden	5	1 6	440	*32·3*	23·88	149	113
d Frant (Eridge Castle)	Mr. A. Wilson	5	1 0	400	..	24·90	..	125
Frant (Highfield)	H. S. Eeles, Esq.	5	1 0	413	..	21·72	..	..
D Groombridge (Crossways)	Capt. D. P. A. Gray	5	1 0	260	..	23·24	150	111
D Hartfield (Bolebroke)	P. R. Mann, Esq.	5	1 0	175	..	22·72	129	110
D E. Grinstead (Brockhurst Obsy)	W. S. Franks, Esq.	8	1 0	435	*32·9*	25·34	170	120
D Wadhurst (Downgate)	Rev. E. P. Gatty	5	1 6	300	..	24·32	146	117
8.—THAMES—Mole. 27 sq. mi.								
D Turners Hill (The Old Manse)	Miss R. M. Ravenshaw	8	1 6	500	..	27·49	155	113
D Worth (Worth Lodge)	C. W. Nix, Esq.	5	1 0	340	*31·9*	25·18	166	123
D Crawley (Orleton Lodge)	B. Longley, Esq.	8	1 0	260	..	23·32	136	116
9.—THAMES—Wey. 10 sq. mi.								
D Milland House	S. Thompson, Esq.	5	1 0	425	..	29·03	143	114
D Liphook (Ripsley)	W. D. Bosanquet, Esq.	5	1 0	400	..	29·82	148	118
HAMPSHIRE. (Area 1,622 sq. mi.)								
1.—ISLE OF WIGHT. 150 sq. mi.								
D St. Catherine's Point (C. G. Stn.)	Station Officer (M.O.)	8	1 8	150	..	23·31	108	96
d Blackgang (H.M. Coastguard)	Mr. H. W. Hawkes	5	1 0	420	..	23·57	..	82
D Ventnor (Royal National Hos.)	The Matron	5	1 0	59	28·9	25·73	138	94
D Ventnor (Cemetery)	The Surveyor	6	1 0	430	..	25·27	127	91
D Shanklin (Pomona Road)	The Town Surveyor	8	1 0	199	..	26·36	133	98
D Brighstone Rectory	Rev. E. W. Silver	5	1 0	140	..	24·36	119	92
d Brighstone (Pitt Place)	A. A. H. Wykeham, Esq.	5	1 7	200	..	21·06	..	79
D Sandown (Sandham Gds.)	The Town Clerk	8	1 0	13	..	23·68	144	96
D The Needles (Golf Club)	Mrs. Newnham	5	1 0	300	..	22·86	128	92
D Totland Bay (Aston House)	Hotel & Pier Co. (J. Dover)	8	1 0	140	28·5	21·08	128	86
D Freshwater (Pumping Station)	J. Dover, Esq.	8	1 0	10	..	22·14	136	89
D Newport (The Mall)	Miss Morey	5	1 0	48	..	25·47	137	98
D Ryde (Perivale)	Major E. C. Murray	5	1 3	193	..	26·61	130	97
D Ryde (West Street)	W. H. Salter, Esq.	5	1 0	170	..	25·58	146	96
D Ryde (Buckland Grange)	Lt.-Col. Sir Hugh Daly	5	1 0	90	..	25·30	159	89
D Ryde (Esplanade Gardens)	Borough Engineer	5	1 9	13	..	23·64	128	86
D Wootton (Fernhill)	The late Major C. G. Brodie, M.C.	8	1 0	118	..	25·36	132	98
D Wootton (Oak Lawn)	R. W. Hutton, Esq.	5	0 9	80	..	26·04	137	97
D Cowes W.W. (Broadfields)	J. W. Webster, Esq., C.E.	5	1 0	161	..	24·15	119	93
D Osborne	The House Governor	5	1 0	177	..	27·64	140	103
D East Cowes (Spring Hill)	Sir George Shedden	5	1 0	123	..	22·96	125	96

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HAMPSHIRE—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
2.—STOUR. 32 sq. mi.								
D Bournemouth (W. Overcliff Drive)	Arthur Scratton, Esq.	5	2 7	96	..	23·95	136	101
D Bournemouth (East Cliff)	Miss M. Penrose, B.Sc.	8	1 0	120	..	21·66	135	88
D Bournemouth (Vale View)	The Corpn.(C.Dales, F. R. Met. Soc.)	5	1 0	145	31·5	23·27	132	93
D Bournemouth (East Avenue)	J. E. Hewitt, Esq.	5	1 0	142	..	23·56	130	96
D Bournemouth (Talbot Woods)	H. Constantine, Esq.	5	1 0	110	..	23·87	130	89
D Christchurch (Heron Court)	The Earl of Malmesbury	8	1 3	19	..	25·56	130	99
D Ringwood (Athol Lodge)	S. O. Ferry, Esq.	5	1 0	60	..	25·13	143	99
3.—EAST AVON & C. 114 sq. mi.								
D Christchurch (Harrow Lodge)	R. C. Bacon, Esq.	8	1 0	135	..	24·69	141	98
D Ringwood (Bisterne)	Major J. D. Mills	8	1 2	45	..	24·71	135	94
D Ringwood (Ashley)	Miss M. E. Williams	5	1 0	100	..	27·62	169	102
D Ringwood (Crow Hill)	Mrs. H. F. Rawstorne	5	1 0	250	..	25·06	141	101
d Ringwood (Grey Friars)	R .W. Christy, Esq.	5	1 0	50	..	24·44	..	92
D Ringwood (Linwood)	Dr. F. H. Haines	5	0 9	138	..	28·19	170	107
D Fordingbridge (Cuckoo Hill)	Heywood Sumner, Esq.	5	1 0	150	..	28·44	154	107
D Fordingbridge (Dockens)	E. W. Poore, Esq.	8	1 0	140	..	27·66	138	101
D Fordingbridge (Oaklands)	S. B. Rake, Esq.	8	1 0	135	31·7	25·63	139	93
d Breamore House Gardens	The Head Gardener	5	1 0	120	..	23·55	..	..
4.—TEST & SOLENT. 551 sq. mi.								
D Milford-on-Sea (Salt Grass)	A. C. G. Heygate, Esq.	5	1 0	6	..	22·04	115	90
D Milford-on-Sea (Rollrights)	Dr. A. Wood	5	1 0	50	..	20·77	112	91
D Lymington (The Salterns)	P. A. Ouvry, Esq.	5	1 0	4	..	21·61	129	91
D Lymington (Woodmancote)	Major G. M. Harding	5	1 0	70	..	23·95	132	91
D New Milton (Manor Rd.)	A. J. Sturmey, Esq.	5	0 9	140	..	24·06	137	98
D Sway (Gordleton)	W .F. Wright, Esq.	5	1 6	102	..	24·06	124	91
d Boldre (Vicars Hill Lodge)	H. H. Wyatt, Esq.	5	2 0	95	..	23·53	..	88
D Sway (Sway Wood)	J. Dixon, Esq.	5	1 0	140	..	23·99	112	93
D Boldre (Battramsley Close)	Dr. H. A. Des Voeux	5	1 1	119	..	24·65	109	93
d Exbury	L. N. de Rothschild, Esq.	5	1 0	85	..	21·04	..	..
D Brockenhurst (Weirs End)	Col. C. Mansel-Jones, V.C.	5	1 0	45	..	24·45	132	95
D Calshot (Aerodrome) (+A)	Officer-in-Charge	8	1 0	8	25·5	21·76	134	94
D Beaulieu (Moonhills Gate)	Lt.-Comdr. A. Betts-Brown	5	1 0	130	..	24·56	167	102
D Burley (Sandys)	G. Mason, Esq.	5	1 0	150	..	25·29	126	100
D Hythe (Buttsash Lane)	G. H. Baker, Esq.	5	1 0	130	..	21·97	127	92
D Fawley (Cadland Park)	The Head Gardener	8	3 0	52	..	24·47	153	100
D Hythe (Dibden House)	Lt.-Col. H. W. Kettlewell	5	1 0	85	..	23·97	135	97
D Cadnam (Canterton Manor)	Miss Jeffreys	5	1 0	125	..	25·95	136	97
Bartley (The Nurseries)	G. H. Dalrymple, Esq.	5	1 2	100	..	28·06	125	96
D Totton (Shorne Hill)	Mrs Rennie	5	1 0	130	..	26·73	141	105
D Southampton (East Park)	Director Ordnance Survey	8	1 0	64	30·9	23·63	139	101
M Southampton Common Res.	J. Hawksley, Esq.	5	1 0	193	..	22·49	..	..
D Romsey (Embley Gardens)	J. J. Crosfield, Esq.	5	1 0	130	..	26·46	135	98
D Romsey (Harefield)	Lt.-Col. W. J. Langford	5	1 0	120	..	27·05	130	107
D Melchet Court	Mr. R. Currie	5	3 0	207	..	25·47	136	97
d Romsey (Timsbury Manor)	A. R. Wilson-Wood, Esq.	5	0 10	75	..	25·57	..	96
D Romsey (Timsbury P.S.)	J. Hawksley, Esq.	5	1 0	92	..	25·90	142	105
Upper Somborne	Charles Alleway, Esq.	8	1 0	250	..	24·67	..	..
D Stockbridge (Houghton Lodge)	Mr. G. Morris	5	1 0	112	..	27·05	120	102
D Crawley (Chilbolton Down)	G. Beale Esq.	8	1 2	350	..	28·35	126	107
D Wonston (Upton House)	H. J. Gardiner, Esq.	5	1 0	229	..	27·94	164	115
D Abbots Ann (The Old Manor)	Miss E. E. de Paravicini	5	0 9	225	..	24·55	149	98
D Andover (Sewage Works)	W. C. Jerome, Esq.	8	1 0	182	..	24·34	125	95
d Andover (Hatherden)	E. E. Leader .Esq.	5	1 0	350	..	(24·03)	(126)	(103)
D St. Mary Bourne (Bournside)	Prof. C. V. Boys, F.R.S.	5	1 0	300	..	26·56	158	112
D St. Mary Bourne (Spring Hill)	Mrs. H. A. Boys	5	1 4	300	..	26·10	135	111

DIVISION II—SOUTH-EASTERN COUNTIES—(*con.*).

STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
HAMPSHIRE—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
4.—TEST & SOLENT—(*con.*).								
D Worting (Manydown Park)...(R)	Col. A. S. Bates, D.S.O.....	5	4 0	415	..	24·90	144	104
Hurstbourne Tarrant (Rookery)...	R. E. C. Burder, Esq.....	5	1 0	331	..	27·16	(155)	(119)
D Whitchurch (Dunley Manor).....	Sir Alfred Herbert.....	5	1 0	500	..	27·00	139	112
D Linkenholt Manor.....	R. Dudley, Esq.....	5	4 0	700	..	25·25	128	108
5.—ITCHEN & SPITHEAD. 422 sq. mi.								
D Alverstoke (Monckton House).....	Major J. Blake.....	5	1 3	15	..	21·89	137	91
D Alverstoke (Glencoe).....	J. G. Thomas, Esq.....	5	1 3	20	..	21·24	133	99
D Gosport.....	Borough Surveyor.....	8	1 0	30	..	21·45	120	91
D Portsmouth (Victoria Park)....	Medical Officer of Health...	5	1 0	15	27·7	21·05	124	89
D Hayling Island (Richmond Ho.)...	E. S. McEuen, Esq.....	5	1 2	16	..	22·07	123	84
D Portsmouth (Eastney).....	The City Engineer	8	1 0	20	..	20·07	124	79
D South Hayling (C. of E. School)...	H. J. Earney, Esq.....	5	1 6	10	..	20·78	140	89
D Lee-on-Solent (Edinburgh Ho. Sch.)	Trevor J. Tatham, Esq.....	5	1 0	15	..	20·50	123	89
d Hook-cum-Warsash.....	E. M. Biggs, Esq.....	5	1 0	50	..	22·11	..	89
d Portchester (Noel Cottage).....	Miss R. M. Frost.....	5	1 0	10	..	20·29	..	89
D Farlington (Pump. Stn.) *new g*....	D.Halton Thomson,Esq.,C.E.	5	1 0	78	..	22·89	126	90
D Farlington (Filter Works) *new g*...	D.Halton Thomson,Esq.,C.E.	5	1 0	157	..	21·85	129	89
D Havant (Portsmouth W.W.).....	D.Halton Thomson,Esq.,C.E.	5	1 0	25	*26·7*	21·90	125	92
D Havant (Warblington).....	F. D. Crossley, Esq.....	8	1 0	22	..	21·60	124	91
d Havant (Wade Court).....	W. E. Sotheby, Esq.	8	1 0	17	..	22·19	..	88
d Fareham (Fareham House).....	W. S. Stevenson, Esq., M.D..	5	1 6	30	..	23·34	..	..
D Southwick (Pinsley Lodge)	D. Halton Thomson, Esq., C.E.	5	1 0	150	..	24·21	132	101
D Fareham (Roche Court).....	Admiral Sir W. De Salis....	5	1 0	103	..	24·69	126	93
D Itchen Sewage Works.....	S. G. Stanton, Esq., C.E....	5	5 8	13	..	21·90	119	84
D Cowplain (Forest View).....	H. C. Pearson, Esq.....	5	5 0	222	..	22·46	129	94
Idsworth (Water Tower)	D.HaltonThomson,Esq.,C.E.	5	1 0	202	..	25·48	..	..
Southwick (Upper Beckford Fm.)	D. Halton Thomson, Esq., C.E.	5	1 0	112	..	24·84	..	..
d Wickham (The Lower House).....	M.-Gn.Sir C.H.Powell,K.C.B.	5	1 4	100	..	24·50	..	93
D Botley (Botley Hill).....	Lady Jenkyns.....	5	1 6	36	..	24·54	132	96
Botley (Uplands Farm).....	Wilmot H. Yates,Esq.	5	1 0	60	..	24·34	127	99
D Curdridge (Kitnocks House).....	Major C. F. Randolph.....	5	1 0	185	..	24·47	160	106
Catherington Reservoir	D. Halton Thomson, Esq., C.E.	5	1 0	428	..	26·97	..	..
D Swanmore (Holywell House).....	Mrs. M. Portal.....	5	1 6	175	..	26·31	150	115
D Hambledon (Whitedale).....	D. Halton Thomson, Esq., C.E.	5	1 0	223	..	27·01	137	104
D Soberton (Mislingford).....	E. T. Hildred, Esq., C.E....	5	1 0	136	..	24·71	122	91
d West End (Oaklands).....	Capt. P. C. Pearson, R.N...	5	1 0	45	..	24·70	..	91
D Swanmore Vicarage	Rev. C. H. Wilson	5	1 0	220	..	24·10	119	93
D Bishops Waltham (Park Ho.)....	A. F. Hardy, Esq.....	5	1 3	170	..	23·98	145	96
D Swanmore House	The Late W. H. Myers, Esq.	5	0 10	395	..	29·75	139	106
D Droxford (Uplands).....	Miss A. M. Bridge.....	5	1 0	279	..	29·75	156	108
D Droxford (Fairfield House).....	H. Hamilton Bridge, Esq...	5	0 9	254	..	28·85	131	99
D Petersfield (Ditcham Park)	C. J. P. Cave, Esq., J.P.....	8	1 0	555	..	32·45	164	108
D Otterbourne W.W.	J. Hawksley, Esq.....	5	1 0	113	..	27·16	123	101
D Twyford (Pumping Station)	J. Hawksley, Esq.....	8	1 9	139	..	27·83	153	98
d Twyford (Church Farm Hse.)	Fleet Surg. S. Conner, R.N., M.B.,	8	1 0	180	..	27·12	..	..
East Meon (Burnside).....	H. A. Gilmour, Esq.....	5	1 5	..	..	29·86	..	..
D Winchester (Shawford).....	J. A. Rooke, Esq.....	5	1 0	250	..	27·80	129	97
D Hursley (Merdon Manor).....	Capt. G. J. R. Cooper.....	5	1 0	360	..	25·00	130	99
D Hursley Park.....	Sir G. A. Cooper, Bart.....	8	1 0	240	..	28·07	139	107
D Compton (Kennington).....	J. Durst, Esq.....	5	1 1	250	..	27·40	129	100
D West Meon (Westwood).....	Major G. E. Galbraith.....	5	1 5	470	..	31·34	154	109
D Winchester (St. Cross).....	G. M. Mathews, Esq.....	5	1 0	135	..	27·47	122	98
D Winchester (High Street)	Kenneth E. N. Williams,Esq.	5	1 0	200	..	28·80	146	108
D Winchester (East Hill).....	Mrs. E. Wildex	5	1 0	256	..	23·72 ?	152	106
d West Tisted Manor.....	Capt. Nelson Zambra, M.C..	5	1 3	650	..	28·66	..	103

DIVISION II—SOUTH-EASTERN COUNTIES—(*con.*).

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	HAMPSHIRE—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
	5.—ITCHEN & SPITHEAD—(*con.*).								
D	Ovington Rectory	Rev. H. L. Atkins	5	1 0	221	33·2	33·98	127	104
d	Winchester (Kings Worthy)	Miss R. P. Woodard	5	1 0	304	..	(26·95)	(136)	(104)
D	Itchen Abbas (Chilland)	W. J. Arnold, Esq.	5	1 3	200	*32·7*	28·01	152	107
D	Itchen Abbas (Itchen Lodge)	Lt.-Col. R. V. Savile	8	0 9	200	..	27·64	140	105
D	Old Alresford (The Gables)	A. E. Broad, Esq.	5	1 0	300	..	28·98	135	110
D	WINCHESTER (WORTHY DOWN Aero) (+A)	Meteorological Officer	8	1 0	275	29·5	26·55	153	105
	6.—ARUN. 32 sq. mi.								
D	Petersfield (Weston)	Capt. P. W. Seward	5	1 0	330	..	31·85	126	115
D	Petersfield (Tilmore)	L. J. Tatham, Esq.	5	1 0	250	..	29·19	147	106
D	Liss (Heathmount)	R. A. Bosanquet, Esq.	5	1 3	490	..	30·47	144	107
D	Liss (Kippences)	Rev. W. L. de B. Thorold	5	0 9	250	..	29·71	141	105
D	Liss (Hawkley Hurst)	T. Clive Davies, Esq.	5	0 11	422	..	33·25	159	122
D	Greatham (Manor House)	Miss I. L. Coryton	5	1 0	260	..	30·33	136	105
D	Greatham (Le Court)	Sir Heath Harrison, Bart.	5	0 9	350	..	30·15	136	108
	7.—THAMES—Wey. 92 sq. mi.								
D	Petersfield (Stoner Hill) (+A)	C. J. P. Cave, Esq., J.P.	5	1 0	748	..	32·42	151	114
D	East Tisted (Rotherfield Park)	Capt. J. B. Scott	5	1 0	550	..	32·88	163	113
D	Newton Valence Vicarage	Rev. A. C. Maclachlan	5	1 0	586	..	28·03	161	108
D	Newton Valence (Shotters)	Major W. H. Chawner	5	1 2	600	..	29·85	136	103
D	Newton Valence Place (R)	Rear-Adm. E. Jervoise, C.B.E.	8	1 5	615	..	29·64	156	110
D	Selborne (The Wakes)	Mrs. Bibby	5	1 0	400	..	31·91	158	113
D	Grayshott	Mrs. Lyndon	5	1 0	661	33·2	31·26	157	118
D	Alice Holt Forest	Forestry Commission	8	1 0	264	..	30·68	133	102
	8.—THAMES—Loddon. 164 sq. mi.								
d	Swainshill	S. G. Weller, Esq.	5	3 0	..	..	28·94	..	..
D	LONG SUTTON (Agric. Coll.)	The Lord Wandsworth Ag. Coll.	5	1 0	479	..	27·25	149	104
d	South Warnborough (Vine Cot.)	Mrs. Gawne	5	1 0	416	..	(26·41)	..	(94)
D	Upton Grey (Hoddington Ho.)	Lord Basing	5	1 0	378	..	26·75	127	103
D	Basingstoke (Upton Grey Ho.)	G. W. Hayes, Esq.	5	1 0	400	..	27·12	144	108
D	Aldershot Waterworks	Mid-S. Dist. Utility Co.	5	1 0	251	..	27·19	136	104
D	Aldershot Reservoirs	Mid.S. Dist. Utility Co.	5	0 7	393	..	26·18	137	102
d	Odiham (Mill House)	W. M. Dean, Esq.	5	1 0	241	..	(24·69)	(131)	(93)
D	Odiham (Sewage Works)	Hartley Wintney, R.D.C. ..	5	1 0	270	..	25·82	134	96
D	Greywell (Pumping Station)	S. G. Weller, Esq.	5	1 0	258	..	24·01	165	99
D	Hook (Nately Hatch)	R. C. Mallock, Esq.	5	1 0	328	..	26·44	160	106
	Fleet (Winchfield)	Major R. E. Fryer	5	1 1	250	..	24·03	..	..
D	Fleet (Home Wood)	Mrs. L. M. Kent	5	1 0	300	..	27·24	106	86
D	Sherborne St. John	The late Rear-Admiral A. S. Lafoné	5	1 0	260	29·0	24·42	146	100
d	Rotherwick (Tylney Hall)	Major Sir H. R. Cayzer, Bt.	5	1 0	250	..	24·35	135	104
D	Hartley Wintney (Council Offices)	Sanitary Inspector, R.D.C.	5	1 0	202	..	25·42	137	101
D	Hartley Wintney (Warren Heath)	Sanitary Inspector, R.D.C.	5	1 0	220	..	23·43	138	110
D	SOUTH FARNBOROUGH (R.A.E.) (+A)	Meteorological Officer	8	1 0	237	26·1	23·12	155	112
D	Bramley (Street Farm House)	F. Walkinshaw, Esq.	8	1 0	227	*28·8*	23·55	153	104
D	Stratfield Turgis (Byland's Cottage)	Miss D. Page-Roberts	5	0 8	218	..	24·20	164	102
D	Heckfield (Park Corner)	Miss V. Martineau	5	1 2	257	24·3	23·70	159	110
	9.—THAMES—Kennet. 65 sq. mi.								
D	Wolverton (Ewhurst Park)	Mr. H. J. Beckingham	5	1 6	410	..	24·26	158	106
D	Highclere (Castle Gardens)	Mr. A. W. Blake	5	1 6	500	..	28·27	155	115
D	Highclere (Black Ford)	W. A. Turner, Esq.	5	1 0	439	..	28·61	144	109
D	Highclere (Adbury Pk. Gdns.)	The Head Gardener	5	1 0	350	..	29·19	158	114
d	Silchester House	T. M. Hartley, Esq.	5	1 0	325	..	23·01	..	..
	BERKSHIRE. (Area, 722 sq. mi.)								
	1.—TEST. 2 sq. mi.								
	2.—THAMES—Bourne. 15 sq. mi.								
	Sunninghill (Frognal)	Mr. D. Chaplin	5	1 0	200	..	22·35	..	..
D	ASCOT (Heatherwood Hospital)	The Medical Superintendent	5	1 0	320	..	21·00	151	103
D	Sunninghill (Blacknest P.S.)	E. J. Toy, Esq.	8	1 0	130	26·0	20·31	147	102
D	Sunninghill (Little Paddocks)	Col. J. N. Horlick, M.C.	5	1 0	200	27·0	20·98	164	112

DIVISION II—SOUTH-EASTERN COUNTIES—(*con.*).

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BERKSHIRE—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
3.—THAMES—Loddon & c. 162 sq. mi.								
D Sandhurst (Eagle House)	J. H. A. Love, Esq.	5	1 0	280	..	21·74	149	112
D Wellington College	A. L. Payne, Esq.	5	1 0	290	26·4	21·89	157	114
d Broadmoor Asylum	The Medical Superintendent	5	1 0	300	27·6	23·65	..	111
D Wokingham (Bucks Copse)	C. W. Marks, Esq.	5	1 0	174	24·7	19·51	130	99
d Wokingham (Appin Lodge)	Rev. W. N. Blakeney	8	0 10	200	25·1	20·30	..	93
D Wokingham (Bear Wood Gdns.)	M. Goddard, Esq.	8	1 0	200	..	20·83	133	109
D Wokingham (Sindlesham Ho.)	Mr. W. Balcombe	5	4 6	200	25·4	19·70	131	97
D Wokingham (Winnersh Nursery)	W. Bates, Esq.	5	1 0	130	..	20·05	148	102
D Winkfield (Ryemead)	Mrs. Aubrey Elliott	5	0 10	220	25·8	18·78	153	100
D Winkfield (Maidens Green)	R. Crosbie-Hill, Esq.	5	1 0	210	26·0	19·81	156	103
D Warfield (Jealott's Hill Farm)	Imp. Chemical Ind., Ltd.	5	1 0	220	25·8	19·84	152	106
D Shurlock Row (Crossways)	John P. Lee, Esq.	5	0 9	149	..	22·17	143	111
D Hurst (Haines Hill)	H. Swanborough, Esq.	5	0 7	155	..	21·90	135	116
D Sonning on Thames (The Deanery)	Capt. N. J. Bengough	5	0 9	120	24·6	19·04	150	94
D Windsor (Royal Gardens)	Mr. C. H. Cook	5	1 0	88	24·9	17·71	164	102
D Twyford (Hare Hatch)	Messrs. J. Waterer, Sons & Crisp, Ltd.	5	1 0	180	..	21·27	141	102
d Bray (Braimel)	N. Vaslet, Esq.	5	1 0	75	..	(18·04)	(124)	(100)
d Maidenhead (The New Hall)	Mrs. Torkington	5	1 0	130	27·2	20·39	..	109
Pinkney's Green	R. P. Lord, Esq.	5	0 10	240	26·7	19·65	..	..
D Maidenhead (Boulter's Lock)	The Thames Conservancy	5	1 6	82	..	18·42	135	107
D Remenham Hill (Wedmore)	Lt.-Col. C. D. Burnell, D.S.O.	5	1 0	300	27·5	21·67	143	109
D Hambleden Lock	Mr. T. E. Wise	5	2 0	107	27·0	20·69	151	105
D Hurley House	Rev. W. Farrer	5	1 0	105	..	20·03	129	99
4.—THAMES—Kennet & c. 224 sq. mi.								
D Inkpen (Manor Farm)	A. A. Lawrence, Esq.	5	1 5	450	31·6	26·69	155	118
D Inkpen (New Mill)	G. C. Goodhart, Esq.	5	1 0	475	32·5	28·15	141	108
d Hampstead Marshall (Redhill)	Mrs. Lewis	5	1 0	400	29·5	25·44	..	105
D Mortimer (Wokefield Park)	Dr. A. Palmer	5	1 0	220	25·2	21·41	140	102
D Mortimer (Oakfield)	Rev. G. G. Skipwith	6	1 0	200	26·1	22·38	178	101
D Brimpton (Stonehouse)	F. Hadden, Esq.	5	0 7	350	27·5	22·99	140	98
Kintbury (Wallingtons)	A. S. Gladstone, Esq.	5	1 0	360	..	25·99	..	..
D§Newbury (Greenham Common)	H. L. Bowman, Esq., D.Sc.	5	1 0	327	29·0	26·12	158	114
D Newbury (Wash Hill)	C. F. B. Marshall, Esq.	5	1 0	385	31·4	24·97	156	105
D Newbury (Wash Hill Ho.)	E. P. Plenty, Esq.	5	1 0	390	29·1	25·46	138	107
D Newbury (Tydeham)	J. H. Spackman, Esq.	5	1 0	400	30·1	24·70	153	104
D Shinfield (University Col. Farm)	Prof. J. A. Crowther	5	1 0	200	..	19·62	132	96
D Bucklebury Place	Mr. J. E. Henshall	5	1 0	409	..	21·58	133	99
D Reading W.W. (Bath Road)	L. C. Walker, Esq., C.E.	5	1 0	218	24·4	20·84	160	115
D Reading (Tilehurst)	Miss M. W. Latham	5	2 0	200	25·6	23·92	156	113
D Reading (Forbury Gardens)	A. S. Parsons, Esq., C.E.	5	1 5	143	24·9	20·24	135	101
D Reading (University College)	Prof. J. A. Crowther	5	1 0	152	..	21·62	148	100
d Reading (Caversham Lock)	The Thames Conservancy	5	1 6	123	..	19·87	..	99
d Chieveley (Priors Court)	G. E. H. Palmer, Esq.	5	1 0	403	..	20·82	..	..
d Peasemore House	H. Brown, Esq.	5	1 0	490	..	20·80	..	..
5.—THAMES—Ock & c. 319 sq. mi.								
D Reading (Englefield)	J. H. Benyon, Esq.	5	1 0	175	27·4	21·49	146	101
D Pangbourne (Woodberry)	W. H. Keep, Esq.	5	1 0	220	..	22·92	146	106
D Upton (Manor House)	Miss C. S. Fry	5	1 0	240	..	17·63	155	94
D Wantage (Lockinge Rectory)	Rev. G. C. Keble	5	1 1	360	27·8	23·50	134	104
d Kingstone Lisle Gardens	Mr. F. Brown	5	0 9	700	27·1	(22·42)	..	..
D Uffington (Woolstone Lodge)	Miss A. E. Butler	5	1 0	350	27·6	23·76	128	101
Steventon (Milton Hill)	R. H. Betteridge, Esq.	5	1 6	300	25·4	20·09	..	..
D Wallingford (Winterbrook)	Frank K. Weedon, Esq.	5	1 0	150	24·9	21·86	138	108
D Wallingford (St. Leonard's R.)	Rev. A. Simmons	5	1 4	142	24·7	19·30	123	90
D Wallingford Castle	Miss E. Hedges	5	1 3	175	23·8	20·68	150	96
D Wallingford (Style Acre)	A. L. Morphew, Esq.	5	1 4	220	25·2	21·76	137	101
D Didcot (Sewage Works)	Wallingford R.D.C.	5	1 1	170	..	17·29	120	93
D Abbots Wittenham Rectory	Rev. W. F. B. Ward	5	1 0	190	..	19·92	144	100
D Long Wittenham (Willington)	H. J. Hewett, Esq.	5	1 0	167	25·2	20·64	144	104
D Abingdon (Sewage Works)	W. H. Lewis, Esq., C.E.	8	1 0	169	22·8	19·67	168	105
D Abingdon (The Firs)	Miss G. G. Challenor	5	1 3	200	23·7	19·55	151	103
D Abingdon (Donnington)	R. W. Langford, Esq.	5	1 0	199	24·7	21·21	157	104
D Boars Hill (Sherwood)	Rev. G. M. Nuttall-Smith, M.A.	5	1 0	444	25·6	19·33	139	104
D Oxford (Kennington Nursery)	W. G. Gray, Esq.	5	0 10	300	24·7	20·70	134	107

§ Gauge somewhat over-sheltered.

DIVISION III—SOUTH MIDLAND COUNTIES.

STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
MIDDLESEX. (Area, 232 sq. mi.)		in.	ft. in.	ft.	in.	in.		
1.—THAMES—Colne & Brent. 185 sq.mi.								
D Weybridge (Shepperton Lock)	Thames Conservancy	5	1 0	41	23·1	20·80	133	103
D Littleton (Queen Mary Res.)	Met. Water Board	5	1 0	44	23·0	19·34	146	103
D Hampton Waterworks	Met. Water Board	5	1 0	27	22·7	17·92	135	96
d Hampton (The Manor House)	The late J. Hughes, Esq.	5	2 0	43	..	17·41	..	..
D Kempton Works	Met. Water Board	5	1 0	40	22·6	17·72	121	91
D Hampton (Gloucester Rd.)	N. B. Palmer, Esq.	5	1 0	50	..	19·10	144	105
D Staines Reservoir (West Side)	Met. Water Board	5	1 6	53	23·8	18·22	128	87
D Staines Reservoir (East Side)	Met. Water Board	5	1 6	53	23·9	17·93	128	90
D Twickenham (Sewage Works) (+A)	The Borough Surveyor	5	1 0	37	..	17·81	131	93
D Sipson (Hollycroft)	Mr. W. J. Mitchell	5	1 0	94	22·5	19·82	140	105
D Kew Bridge (Waterworks)	Met. Water Board	5	1 0	36	24·1	19·25	137	99
d Chiswick (Turnham Green)	The Borough Engineer	8	1 0	27	23·3	18·43	..	..
D Hanwell (+A)	Middlesex County Council	5	1 9	36	24·5	18·29	124	99
D Ealing (Longfield Avenue)	W. R. Hicks, Esq., C.E.	5	0 9	114	..	17·63	128	98
D Ealing (St. Stephen's Road)	H. W. Peal, Esq.	5	1 0	156	..	18·12	136	97
D Hayes Sewage Works (+A)	Middlesex County Council	5	2 3	98	..	16·77	132	96
D Ealing (Hanger Hill Reservoir)	Met. Water Board	5	1 0	206	24·7	19·03	144	100
D Greenford (+A)	Middlesex County Council	5	1 3	61	..	18·64	174	102
D Perivale (Northern Sewage Farm)	W. R. Hicks, Esq., C.E.	8	1 0	56	24·0	18·81	148	102
D Alperton (Sewage Works)	C. R. W. Chapman, Esq., C.E.	8	1 2	80	..	20·80	164	100
D Willesden Reservoir	Met. Water Board	5	1 0	167	25·6	18·07	147	105
d Willesden (Stonebridge Fm.) (R)	F. Wilkinson, Esq., C.E.	10	5 9	100	..	18·11	..	93
D Ickenham Sewage Works (+A)	Middlesex County Council	5	1 8	109	23·6	18·18	139	100
D Sudbury (Station Approach)	L. H. Powers, Esq.	8	1 0	153	24·3	19·48	156	103
D Sudbury (36, Station Approach)	R. M. Eadie, Esq.	5	0 11	152	..	20·13	146	101
D Golders Green (Dunstan Road)	Capt. A. E. Mackenzie	5	1 0	240	25·3	17·51	144	99
D Highgate (North Hill Depot)	W. H. Adams, Esq., C.E.	5	1 0	303	25·4	18·60	158	111
D Harrow (Oakhurst)	Hugh Gardner, Esq.	5	1 0	295	24·2	18·67	163	107
d Harrow (Bessborough Rd. Depot)	J. P. Bennetts, Esq., C.E.	5	1 0	215	25·8	19·32	..	107
D Hendon (Sewage Works)	A. O. Knight, Esq., C.E.	6	1 6	153	..	15·90	140	92
D Finchley (Church End)	Sr. Marie Hilda	5	0 8	300	..	17·22	151	104
D Wealdstone (Sewage Works) (+A)	The Surveyor	5	1 0	154	24·9	18·64	141	101
D Wealdstone (Kodak Works)	Messrs. Kodak, Ltd	5	1 0	193	..	19·41	154	103
d Harrow (Wealdstone House)	Miss H. O. E. Cobb	5	1 0	236	25·1	19·24	(145)	(104)
Northwood (Tandridge)	Chas. Price, Esq.	5	1 0	..	25·5	17·46	..	..
D Northwood (St. Mary's Ave.)	R. H. Daw, Esq.	5	1 0	231	..	18·04	150	105
d Northwood (Haslemere)	Miss L. McBean	5	1 0	240	26·4	(19·91)	..	..
D Edgware M.C.C. Depot (+A)	Middlesex County Council	5	0 9	179	25·8	20·05	129	106
D Mill Hill (Ridgeway House)	Major N. G. Brett-James	5	1 0	375	..	17·43	124	108
D Bushey Heath (Highfield)	W.B.Worthington,Esq.,C.E.	5	1 0	503	..	18·30	152	103
d Elstree (Barnet Lane)	G. V. Maxted, Esq., C.E.	8	1 0	490	..	(19·47)	..	..
D Potters Bar (Mount Grace)	J. Forbes, Esq.	5	1 3	375	26·1	20·07	153	111
2.—THAMES—Lea. 47 sq. mi.								
D Stroud Green (Mount View Rd.)	L. R. Bennett, Esq.	5	1 0	212	..	15·89	164	103
D Stroud Green (Oakfield Road)	E. A. Madge, Esq.	5	1 0	206	..	15·79	134	96
D Crouch End (Barrington Rd.) (+A)	W. H. Adams, Esq., C.E.	8	1 0	118	25·8	18·27	163	106
D Tottenham (Drayton Road)	Medical Officer of Health	5	1 3	51	23·3	16·31	136	106
D Hornsey (High Street)	Met. Water Board	5	1 2	107	24·9	15·93	130	99
D Muswell Hill (Wightman Rd.)	W. H. Adams, Esq., C.E.	8	1 0	113	..	16·85	148	103
D Muswell Hill (Sewage Farm) (+A)	W. H. Adams, Esq., C.E.	8	1 0	209	26·1	18·15	155	110
D Wood Green (Maryland Road)	F. C. Hornsey, Esq.	6	1 0	110	..	15·75	136	103
D Finchley (Victoria Park)	P. T. Harrison, Esq., C.E.	5	1 0	272	26·3	16·50	143	99
D Palmers Gr. (Broomfield Pk.) (+A)	R. Phillips, Esq., C.E.	8	1 6	136	24·7	16·74	145	109
D Winchmore Hill (Elsiedene Road)	V. E. Steers, Esq.	5	1 0	150	26·7	19·07	156	107
D Ponders End Pumping Station	Met. Water Board	5	1 0	45	23·3	15·97	132	99
D Enfield (Southbury Road)	Met. Water Board	5	1 0	105	24·7	17·85	142	108

DIVISION III—SOUTH MIDLAND COUNTIES—(*con.*).

STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
MIDDLESEX—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
2.—THAMES—Lea.—(*con.*)								
D Enfield (Forty Hill)	Dr. E. C. Carter	5	0 11	125	..	16·89	129	101
D Enfield (Roselands, Turkey St.)	E. S. Rashleigh, Esq	5	1 0	80	23·2	16·37	139	105
D Waltham Cross (Sewage Works)	J. E. Sharpe, Esq	5	1 0	61	22·6	16·12	131	100
HERTFORDSHIRE. (Area, 635 sq. mi.)								
1.—THAMES—Thame. 10 sq. mi.								
D Tring (Akeman St.)	T. Grace, Esq	8	1 0	450	29·4	20·30	164	109
D Tring (Pendley Manor)	Mrs. J. G. Williams	5	1 0	420	28·4	21·00	150	122
d Tring (Brookfield)	The late Brig.-Gen. C. J. Steavenson, C.B., C.M.G.	6	1 3	430	27·6	19·88	..	101
2.—THAMES—Colne and Brent. 199 sq. mi.								
D Northwood (Woodhouse Eaves)	Miss S. F. Fox, M.D.	5	1 0	400	27·6	20·38	167	117
d Bushey Heath (California La.)	C. C. Cooper, Esq	5	1 0	500	26·0	18·81	..	105
w Totteridge (West Lodge)	P. D. Walker, Esq	5	1 4	410	26·9	18·08	..	..
d Batchworth (Pumping Stn.)	J. Grimmett, Esq	5	1 2	156	..	20·91	..	..
d Rickmansworth (Croxley Green)	S. Ingleby Oddie, Esq	5	1 0	262	27·2	19·47	..	110
D Rickmansworth (Valley Road)	E. L. Hawke, Esq., M.A.	5	1 0	192	..	21·35	182	113
D Barnet (Bedford Avenue)	Miss M. Haines	5	1 4	350	27·9	20·06	158	120
d Barnet (Jesus Hospital)	P. J. Neville, Esq.	5	1 0	335	..	18·42	..	102
D Barnet (Sewage Works) (+A)	E. Scott, Esq., C.E.	5	1 0	295	..	18·80	160	107
d Watford (Colne Valley W.W.)	C. P. Sinclair, Esq	5	3 0	200	25·6	16·93	..	102
d Watford (Waterworks)	W. W. Newman, Esq., C.E.	6	1 9	175	25·9	16·85	..	..
d Watford (Cassiobury Pk. Av.)	E. A. Robins, Esq.	5	1 0	240	26·2	16·97	..	..
D Watford (Stratford Road)	Miss L. M. Slinn	5	1 0	340	26·0	17·65	148	117
d Heronsgate (Waterfield Ho.)	A. J. Richardson, Esq.	5	1 0	390	..	21·31	..	100
d Sarratt (Micklefield Green)	J. O. Hickman, Esq	5	1 0	380	29·0	19·61	..	110
D Shenley Grange	J. Charrington, Esq	5	0 9	430	27·9	19·33	151	110
D Shenley (Kitwells)	T. H. Riches, Esq	5	1 0	420	27·5	19·74	147	115
D Sarratt (Goldingtons)	P. Clutterbuck, Esq	5	1 0	384	29·0	20·84	140	113
D Chipperfield (Little Callipers)	Miss M. M. Rivington,	5	1 0	407	..	20·14	131	111
D Kings Langley (Fir Tree Cottage)	Edward Toms, Esq	5	1 0	278	28·1	18·81	156	101
D Kings Langley (Langley Rise)	F. W. Rowson, Esq	5	0 9	300	27·4	18·47	137	108
D Park Street (Bricketwood)	F. J. McLees, Esq	5	1 0	300	25·5	16·96	143	101
D Hemel Hempstead (Apsley Mills)	Messrs. J. Dickinson & Co.	24	1 4	268	27·9	19·89	164	107
D Colney Heath (Tyttenhanger P.S.)	J. F. Haseldine, Esq	5	0 9	241	25·7	18·07	141	101
D Hemel Hempstead (Northridge)	R. C. Micklem, Esq	5	1 0	460	31·6	23·75	192	131
D St. Albans (Co. Mental Hosp.)	G. Goodchild, Esq	5	1 0	295	25·1	17·27	119	100
D St. Albans (County Museum)	Mrs. Bullen	5	1 0	389	27·4	17·94	142	108
D St. Albans (Oaklands Inst.)	The Principal	5	1 0	272	24·9	16·32	128	93
D St. Albans (Gorhambury)	The Head Gardener	5	1 0	423	27·9	17·80	135	99
D Hatfield (Hatfield P. Stn.)	J. F. Haseldine, Esq	5	1 0	334	24·7	17·20	147	98
D Berkhamsted (Rossway)	The Lady Hadden	5	1 1	590	..	24·83	186	119
D Berkhamsted (Anglefield)	E. T. Browne, Esq	5	1 0	450	29·8	21·27	157	109
D Tring (Cowroast Lock) *new g.*	Grand Union Canal Co.	5	1 0	390	29·7	21·28	138	115
D Harpenden (Rothamsted) (+A)	Lawes Agricultural Trust	8	0 9	420	26·7	17·17	154	102
D Harpenden (Rothamsted)	Lawes Agricultural Trust	5	1 0	420	27·3	17·54	142	101
D Harpenden (Rothamsted)	Lawes Agricultural Trust	72+87	0 9	420	28·6	18·61	152	101
d Little Gaddesden (Ringshall End)	H. C. Bradby, Esq	5	1 0	700	28·9	20·36	..	..
3.—THAMES—Lea. 340 sq. mi.								
d Cheshunt (Manor House)	J. E. Sharpe, Esq	5	1 0	83	24·2	16·15	..	..
d Northaw School	C. Steventon, Esq	5	5 0	400	26·8	17·28	..	97
D Cheshunt Yard	Met. Water Board	5	1 0	100	24·1	16·52	153	96
D Cheshunt (Cheshunt Park)	J. A. Wanklyn, Esq	5	0 9	209	23·2	17·73	156	97
D Cheshunt (Darnicle Hill P Stn.)	Met. Water Board	5	1 0	250	26·2	18·37	143	102
D Hertford (Epping House)	Lady Brodie Henderson	5	0 9	400	25·1	19·12	159	98
d Essendon Place Gardens	J. B. Healing, Esq	5	1 0	365	26·6	18·98	..	..
Little Berkhampstead	A. Noble, Esq	5	1 0	380	25·0	19·61	..	..
d Hatfield (Co. Surveyor's Office)	Lt.Col. A. E. Prescott, C.E.	5	1 0	265	24·5	18·66	..	..
D Hoddesdon	H. F. Hayllar, Esq	5	5 0	120	23·7	17·26	137	100
D Hoddesdon (Feilde's Weir)	Met. Water Board	5	1 7	95	23·7	18·18	137	108

DIVISION III—SOUTH MIDLAND COUNTIES—(*con.*).

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	HERTFORDSHIRE—(*con.*)		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
	3.—THAMES—Lea—(*con.*)								
D	Haileybury College	The Headmaster	8	1 0	270	24·8	17·77	148	100
D	Hertford (Bayfordbury)	H. W. Clinton Baker, Esq.	8	1 2	250	24·6	18·91	154	105
D	Stanstead Abbots (Warrax)	E. H. Barlow, Esq.	5	1 2	110	24·4	17·54	129	101
d	Gilston Park	The Head Gardener	8	1 0	175	25·7	17·72	..	..
D	Welwyn Garden City (Sewage Wks.)	† H. A. Cook, Esq., C.E.	5	1 0	246	24·7	18·20	159	109
D	Hertford (Sewage Works)	Met. Water Board.	5	1 0	123	23·3	18·20	152	98
D	Ware (Red House)	Met. Water Board.	5	1 0	105	23·5	17·83	142	98
D	Ware Grammar School	The Headmistress	5	1 0	118	23·0	18·80	128	97
D	Ware (Chadwell Spring)	Met. Water Board	5	1 0	140	24·2	18·19	135	98
D	Welwyn Garden City (Valley Rd.)	Comdr. W. George Lingham.	5	1 0	300	24·8	18·36	158	107
D	Welwyn (Harmer Green)	Mrs. E. Weber.	5	1 0	403	25·5	18·54	151	110
d	Welwyn (Codicote Lodge)	Mr. G. J. Miller.	5	1 0	340	25·8	17·15	..	..
D	Much Hadham	Miss J. Mott	5	1 0	212	25·1	18·90	142	112
d	Much Hadham (Lordship)	Capt. W. Glynes Bruty.	5	0 10	205	24·5	18·41	..	103
D	Bishop Stortford (Twyford H.)	Laurie Frere, Esq.	5	1 0	181	23·7	17·88	148	104
	Breachwood Green	S. J. Simpson, Esq.	5	2 0	484	..	18·39	..	..
D	Standon	F. H. Wace, Esq	5	2 0	375	..	17·18	143	102
D	Little Hadham (Hadham Hall)	W. Minet, Esq.	5	0 10	338	24·5	19·05	132	114
	Hitchin (King's Walden Bury)	Major J. F. Harrison.	8	1 2	400	..	17·86	134	102
D	Hitchin (Preston)	R. de. V. Pryor, Esq.	8	1 0	484	25·2	18·63	143	110
D	Furneaux Pelham (The Brewery)	G. Warren Bindloss, Esq.	5	1 0	300	24·8	19·49	150	110
D	Royston (Therfield Rectory)	Rev. H. R. Humphreys.	5	1 0	512	25·2	18·43	148	106
	4.—OUSE. 86 sq. mi.								
	Offley (School House)	The Headmaster	5	1 0	526	25·4	17·37	..	..
D	Hitchin (Newlands)	F. Ransom, Esq.	5	1 0	271	24·8	17·26	151	106
D	Hitchin (Chiltern Road)	The late A. Latchmore, Esq.	5	1 0	297	23·3	15·54	142	97
d	Hitchin (High Down)	Miss E. Pollard.	5	1 1	421	24·6	17·22	..	107
d	Letchworth (Gernon Road)	A. W. Brunt, Esq.	5	1 0	280	22·8	15·45	..	..
d	Letchworth (Sollershott)	Miss H. Leather.	5	1 0	300	22·8	17·76	(142)	(98)
D	Letchworth (Sollershott West)	Edward Grubb, Esq.	8	0 11	310	23·1	17·35	142	102
d	Letchworth (Fire Station)	The Surveyor, U.D.C.	5	1 0	290	22·3	18·66	..	..
d	Barley (Dalnyveed)	W. F. Sermons, Esq.	5	1 0	300	24·0	16·05	..	97
D	Royston (Earls Hill House)	Col. E. C. M. Phillips, D.S.O.	8	1 3	225	23·6	17·80	157	103
	BUCKINGHAMSHIRE. (Area, 743 sq. mi.)								
	1.—THAMES—Cherwell. 30 sq. mi.								
	2.—THAMES—Thame. 158 sq. mi.								
D	Parslow's Hillocks	Col. C. S. Prichard.	5	1 0	770	31·1	22·43	173	117
D	Princes Risborough (Research Lab.)	The Director.	5	1 0	333	..	20·93	162	108
D	Little Kimble	Dr. L. T. Burra.	5	0 10	370	25·0	18·13	148	99
d	Weston Turville	G. Eland, Esq.	5	1 0	320	25·5	17·47	..	100
D	Tring (Bulbourne)	Grand Union Canal Co.	5	1 0	401	26·2	17·17	155	110
D	Aylesbury (Sewage Works)	W. H. Taylor, Esq.	5	1 0	251	25·9	18·05	177	99
d	Quainton (Quainton Cottage)	Sir L. H. West, O.B.E.	5	1 0	350	..	16·71	..	..
	3.—THAMES—Wye & c. 129 sq. mi.								
D	Eton (Tangier Island)	F. N. McRae, Esq.	5	0 8	68	24·6	19·34	154	113
D	Slough (Upton)	R. Bentley, Esq.	5	1 0	78	23·9	19·22	145	105
D	Taplow (Beechwood)	Wm. Wood & Son, Ltd.	5	..	..	..	17·96	136	96
D	Taplow Court Gardens *new gauge*	G. H. Emmett, Esq.	5	1 0	211	23·9	19·27	138	108
D	Taplow (Hitcham Grange)	Hon. C. S. Irby.	5	1 0	180	23·3	16·98	131	95
d	Henley-on-Thames (Greenlands)	Lord Hambleden.	5	1 0	116	27·1	19·21	..	..
D	Burnham Vicarage	Rev. P. Nott	5	1 9	100	..	18·46	146	102
D	Bourne End	Major Forbes Holland.	5	2 0	91	..	22·62	139	110
d	Bourne End (Hedsor)	J. Wood, Esq.	8	1 0	170	..	20·54	..	102
D	High Wycombe (Flackwell Hth.)	E. Dickson Park, Esq.	5	1 10	365	26·8	21·26	141	99
D	High Wycombe (Roy. Gram. Sch.)	The Headmaster	9	1 0	545	29·1	20·66	143	104
D	Penn (Woodside)	Miss E. M. T. Epps.	5	1 0	500	30·7	23·75	172	110
D	Penn (Rayners)	Mr. E. Peett.	5	1 10	547	29·4	23·15	142	102
D	Hampden House	The Earl of Buckinghamshire	5	1 0	695	29·2	21·67	158	118

† Previously called Estate Office.

DIVISION III—SOUTH MIDLAND COUNTIES—(*con.*).

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BUCKINGHAMSHIRE—(*con.*)		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
4.—THAMES—Colne. 133 sq. mi.								
d Wraysbury School	R. Watson, Esq.	5	0 8	59	..	17·85	..	..
D Slough (Ditton Park)	G. B. Harrison, Esq.	5	2 0	70	24·7	18·46	135	108
D Slough (Langley)	R. H. Major, Esq.	8	0 10	85	23·9	18·18	141	103
D Denham Golf Club	The Secretary	5	0 11	210	26·4	17·22	125	104
d Gerrards Cross (Bulstrode Gdns.)	Mr. G. Taylor	5	1 6	280	27·2	19·10	..	105
D Chalfont St. Giles (Up Corner Cot.)	Capt. R. E. Field	8	0 8	300	29·6	20·95	141	112
D Beaconsfield	S. H. Dyer, Esq.	5	0 10	300	27·7	20·88	149	105
d High Wycombe (Hazlemere Sch.)	A. J. Chapman, Esq.	5	1 0	568	28·1	18·75	..	..
D Chalfont St. Giles (Roughw'd P'k.)	Thurston Agelasto, Esq.	5	1 0	400	28·8	20·06	132	107
D Amersham Waterworks	F. L. Gordon, Esq.	8	1 0	292	..	21·04	137	106
D Amersham Common (The Plantation)	Mrs. G. H. Fawcett.	8	1 0	464	28·2	20·45	162	108
D Amersham Common (Stanmore)	W. Garton, Esq.	5	1 0	517	30·6	20·31	158	107
D Gt. Missenden (Pumping Sta.)	J. Grimmett, Esq.	5	0 11	377	27·6	20·92	140	104
d Chesham (Nashleigh Hill)	Mrs. Hayes	5	1 0	530	29·1	19·78	(155)	(103)
D Mayortorne Manor	Miss N. E. Laycock	5	0 9	500	28·7	19·83	150	101
5.—OUSE. 293 sq. mi.								
D Oving House	Mrs. H. Yates Thompson	5	1 0	515	26·4	20·39	154	111
D Wing (Burcott)	R. H. Ayres, Esq.	5	1 6	407	27·4	19·64	137	110
d Swanbourne House School	L. L. C. Evans, Esq.	5	1 0	411	26·3	20·73	..	108
D Mursley Hall	Lady Beecham	8	1 0	490	25·7	19·07	139	92
D Buckingham (Market Hill)	A. Pettipher, Esq.	5	1 0	300	25·3	19·49	155	102
D Wavendon (Endowed School)	T. G. M. Watson, Esq.	5	1 0	309	24·2	18·93	137	112
D Stony Stratford (Calverton L.)	Lt.-Col. L. C. Hawkins.	5	1 0	230	24·1	18·61	155	108
D Wolverton (St. George's Vic.)	Rev. Canon W. L. Harnett.	5	1 0	270	24·2	18·72	163	106
D Wolverton (Gables Lodge)	J. Forster, Esq.	5	1 0	264	24·0	18·58	154	99
d Wolverton (Council School)	The Headmaster	5	5 0	263	22·9	17·06	..	..
D Newport Pagnell (Lathbury)	F. W. Coates, Esq.	8	1 2	228	23·2	17·56	154	95
d Olney (Gresham Ho.)	H. J. Wells, Esq.	8	1 0	150	..	16·40	(131)	(95)
d Turvey (Brayfield House)	Major D. Farrer, J.P.	5	4 0	188	23·3	16·91	..	93
OXFORDSHIRE. (Area, 756 sq. mi.)								
1.—SEVERN—Upper Avon. 10 sq. mi.								
D Sibford Ferris (Woolman Cottage)	Joshua Lamb, Esq.	5	1 0	570	*27·6*	19·48	144	95
2.—THAMES—Windrush & c. 261 sq. mi.								
D Kelmscott	R. Hobbs, Esq.	6	0 10	150	..	20·12	123	88
D Bampton (C.E. School)	E. W. Fry, Esq.	5	0 10	233	..	21·22	143	106
Broughton Poggs	Mrs. Hardcastle	5	1 0	275	..	20·02	..	..
D Filkins	Hon. Sir Stafford Cripps, K.C.	5	2 7	279	..	18·91	149	95
d Witney (Cokethorpe)	Major H. G. Feilden	5	1 4	230	..	19·71	..	..
D Charlbury (Cornbury Park)	The Head Gardener	5	1 0	420	..	22·57	140	104
D Wootton Rectory	Rev. F. R. Marriott	5	1 0	375	..	21·64	151	108
D Lyneham	R. de M. Pratt, Esq.	5	1 0	351	..	20·10	138	103
D Bruern Abbey (The Gardens)	F. S. Smith, Esq.	5	1 0	340	..	21·63	138	99
D Chadlington (The Manor)	P. Handy, Esq.	5	0 9	400	..	19·41	132	91
D Chadlington (Langston House)	Lt.-Col. F. W. Schofield, CMG.	6	1 0	430	..	21·34	156	107
D Chipping Norton (Heythrop Col.)	The Procurator.	8	1 0	600	..	20·46	130	93
D Chipping Norton (Bungalow)	T. H. Pettipher, Esq.	5	1 0	750	..	19·66	159	89
D Chipping Norton (Choice Hill)	E. W. Arkell, Esq.	5	1 0	500	..	19·76	142	88
3.—THAMES—Cherwell. 250 sq. mi.								
D Nuneham Park Gardens	The Head Gardener	8	1 0	280	..	21·21	155	106
D Oxford (Hincksey Pumping Sta.)	City Engineer	8	1 0	187	..	19·43	158	104
D Oxford (Osney Lock)	Thames Conservancy	5	1 6	188	..	18·95	161	104
D Oxford (Magdalen College)	F. J. Parker, Esq.	5	1 0	186	23·8	17·72	152	101
D Oxford (Radcliffe Obs.) (+A)	The Radcliffe Observer	8	1 8	208	24·8	19·30	154	105
D Headington (Warneford Asy.)	Dr. A. W. Neill.	5	1 0	300	..	17·78	137	104
D Headington (Forest Lodge)	Major A. V. Spencer, D.S.O.	5	0 11	333	..	18·88	131	95
D Headington Hill (Thornhill)	E. S. Fry, Esq.	5	1 0	..	..	18·91	153	102

DIVISION III—SOUTH MIDLAND COUNTIES—(*con.*).

STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or more.	1933. Days with ·04in. or more.
OXFORDSHIRE—(*con.*)		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
3.—THAMES—Cherwell—(*con.*)								
D Elsfield (Home Farm)	Miss M. J. Parsons	5	1 0	355	..	20·13	136	98
D Tackley (Hill Court)	W. Evetts, Esq., Junr.	5	1 0	340	*27·9*	21·41	143	102
D Middleton Park (*new g*)	The Earl of Jersey	5	1 6	326	25·8	21·30	143	105
D Upper Heyford (Aerodrome)(+A)	Meteorological Officer	8	1 0	408	..	20·78	154	96
D Steeple Aston (The Grange)	Arthur E. Bradshaw, Esq.	8	1 0	400	*27·2*	21·96	166	98
D Deddington (Souldern Court)	P. Withers, Esq	5	1 0	340	..	20·27	159	97
D West Adderbury (Court End)	Lt.-Col. H. E. du C. Norris	5	0 10	330	..	19·42	143	103
D West Adderbury (Cross Hill)	Lt.-Col. H. E. du C. Norris	5	1 0	338	..	19·03	153	99
D West Adderbury (St. Amand's)	Miss M. M. Bradford	8	1 2	320	..	20·02	154	107
D Adderbury (The Rookery)	C. C. Bradford, Esq	8	1 0	323	..	20·47	146	113
d Banbury (Cotefield)	Capt. C. N. Keyser	5	1 0	300	..	18·16	..	99
D Broughton Rectory	Rev. B. W. Bradford	5	1 6	370	..	20·12	153	98
D N. Newington (Orchard Ho.)	H. J. Busby, Esq.	5	1 3	425	..	18·19	147	100
*Grimsbury (Banbury W.W.)	Banbury Water Co.	5	1 3	316	..	17·91	..	..
D Wroxton	Hon. Mrs. Fitz Gerald	8	1 6	500	..	18·72	155	105
4.—THAMES—Thame & c. 210 sq. mi.								
D Shiplake	Lt.-Col. C. A. Yool, D.S.O.	5	1 0	156	..	22·73	167	117
d Goring Heath	Rev. Canon F. T. Wintle	5	1 0	400	..	22·78	..	112
D Shiplake (Crescent Key)	A. E. Hobbs, Esq.	5	1 1	127	..	20·31	138	104
D Goring	G. C. Turner, Esq.	5	1 0	159	..	22·09	163	106
D Harpsden (Cray) (+A)	B. E. Dunbar Kilburn, Esq.	5	1 0	230	..	22·18	143	106
D Henley-on-Thames (Hart St.)	A. Edward Hobbs, Esq	5	1 6	110	..	21·02	141	106
D Henley-on-Thames (Greys Lane)	G. F. Smith, Esq.	5	0 9	123	..	22·15	128	109
D Henley-on-Thames (Greys Gr.)	Mrs. H. Wolferstan	5	1 6	350	..	23·05	156	115
D Ipsden (Hailey)	Glynne Williams, Esq	5	1 0	350	..	22·72	174	103
D Nettlebed (Joyce Grove) No. 1	Mr. F. Morby	5	1 0	590	..	26·32	154	117
d Swyncombe House	C. W. Christie-Miller, Esq.	5	1 0	515	..	23·71	..	109
D Culham	F. Mitchell, Esq.	5	0 10	180	..	18·79	142	102
Culham (Zouch Farm)	P. E. Saunder, Esq	5	3 0	186	..	18·58	..	..
D Clifton Hampden (Manor House)	Lord Aldenham	5	1 0	190	*24·9*	20·54	146	110
D Watlington (Pyrton Manor)	Major H. Ducat Hamersley.	5	1 0	325	*26·7*	19·38	157	106
d Wheatfield	A. J. Spencer, Esq.	5	0 11	275	..	19·31	..	104
Toot Baldon (Potland)	D. Clinkard, Esq.	5	1 0	288	..	20·62	..	..
D Towersey Vicarage†	Rev. H. E. Cooper	5	1 0	250	27·5	19·51	149	104
5.—OUSE. 25 sq. mi.								
NORTHAMPTONSHIRE. (Area, 1003 sq. mi.)								
1.—SEVERN—Upper Avon. 60 sq. mi.								
D Rugby (Kilsby Vicarage)	Rev. C. Ryder Macnally*	5	0 10	450	..	22·21	150	112
D Winwick Warren	Capt. P. L. Ransom	8	1 5	648	..	22·52	187	128
D Naseby Reservoir	Grand Union Canal Co.	5	1 6	519	..	19·26	169	107
2.—THAMES—Cherwell. 77 sq. mi.								
D Croughton	C. A. St. George Moore, Esq.	5	1 0	430	..	19·93	141	101
d*King's Sutton (Manor House)	G. Morgan, Esq.	5	1 0	338	..	18·30	..	..
3.—OUSE. 148 sq. mi.								
D*Brackley (Waterworks)	W. M. Oldreive, Esq.	5	1 2	471	..	17·45	128	96
d Hazelborough Woods	Forestry Commission	8	1 0	241	..	(17·15)	..	(97)
d Silverstone (Council School)	J. P. Osborne, Esq.	5	1 0	400	..	19·17	..	97
D Wappenham (Lois Weedon Vic.)	Rev. E. V. Fenn	5	1 2	400	..	19·33	156	109
D Towcester (Bradden House)	Miss U. Grant-Ives	5	0 10	420	..	19·97	158	113
D Towcester (Easton Neston)	Sir T. Fermor-Hesketh, Bt.	8	1 0	325	..	18·68	161	106
d Roade (Council School)	The Headmaster	8	1 0	394		19·00	..	107
w Hargrave Hall	Sir K. Murchison	5	1 0	273	..	17·98	..	..
4.—NENE. 622 sq. mi.								
D Salcey Forest	Forestry Commission	8	1 3	370	..	19·68	145	101
D*Blisworth (Crieff House)	A. Westley, Esq.	5	1 0	351	*25·1*	18·80	161	104
D Blisworth (Grand Junc. Canal)	Grand Union Canal Co.	5	1 6	300	..	18·95	163	100
D*Little Houghton House	Christopher Smyth, Esq.	5	1 0	270	..	18·03	140	94

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† Station previously in Buckinghamshire 2.

DIVISION III—SOUTH MIDLAND COUNTIES—(*con.*).

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NORTHAMPTONSHIRE—(*con.*)		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
4.—NENE—(*con.*)								
d Northampton (Upton)	J. R. Foster, Esq.	5	1 0	270	..	17·82	..	101
d Northampton (South Bridge)	R. Nene Catchment Bd.	5	7 0	190	..	16·77	..	..
d*Northampton (General Hosp.)	H. St. John Wood, Esq.	5	1 1	259	..	17·53	..	91
D Northampton (Mental Hosp.)	W. R. Budgen, Esq.*	8	1 2	398	..	19·94	167	106
D*Northampton (Stimpson Av.)	F. Tomlinson, Esq., C.E.§	8	1 0	329	..	17·90	142	101
D*Northampton (Mercers Row)	R. H. Primavesi, Esq.	5	12 0	240	..	18·53	166	106
d Flore	Major C. A. Markham*	5	1 0	344	..	20·68	..	112
D*Duston (Southfield Road)	W. P. Walker, Esq.	5	1 0	342	..	20·03	157	113
D Wollaston	G. Harris, Esq.	5	2 0	250	..	16·70	137	95
D Daventry (Tunnel End)	Grand Union Canal Co.	5	1 6	394	..	20·14	163	101
D*Althorp Park	Mr. G. Low	5	1 3	414	..	21·53	164	102
D Sywell Hall	Brig.-Gen. H. E. Stockdale	5	1 0	371	..	20·55	156	99
D*Pitsford (Sedgebrook)	Major C. A. Markham	5	1 0	311	24·5	19·12	119	91
D Wellingborough (Nene Wharf)	R. Nene Catchment Bd.	5	1 0	135	..	17·46	118	89
D*Wellingborough (Swanspool)	R. S. Henshaw, Esq., C.E.	5	1 0	169	24·3	17·45	130	86
d Wellingborough (Sewage Works)	R. S. Henshaw, Esq., C.E.	5	1 0	139	..	16·54	..	89
D Wellingboro' (Bushfield W.W.)	R. S. Henshaw, Esq., C.E.	8	0 11	286	..	17·62	141	89
*Watford Court	Lord Henley	8	1 0	430	..	20·97	..	..
D Ravensthorpe	F. Tomlinson, Esq.	5	1 0	370	..	19·01	153	105
D Hardwick P.S.	R. S. Henshaw, Esq., C.E.	5	0 9	318	..	16·93	137	93
D RAUNDS (Council School)	The Headmaster	5	1 0	213	23·5	16·07	134	94
D Kettering W.W. (Cransley)	Major J. P. Haugh	8	1 0	275	..	19·53	149	98
D*Kettering (Sewage Works)	Major J. P. Haugh	8	1 0	199	..	17·73	154	105
D Kettering W.W. (Thorpe Malsor)	Major J. P. Haugh	5	1 0	351	..	19·91	160	98
D Kettering W.W. (Clover Hill)	Major J. P. Haugh	5	1 0	344	..	16·65	155	95
D Thrapston (Drayton Ho.)	Mr. C. V. Craske	5	1 6	220	..	18·42	132	113
d Thrapston (Islip)	G. E. Abbott, Esq.	5	1 0	150	..	17·69	..	..
Rothwell (Loddington)	Mr. J. Oliff	5	1 0	400	..	20·28	135	..
D Tichmarsh Rectory	Rev. Canon A. M. Luckock*	5	1 0	170	..	18·96	155	106
D Rothwell (Shotwell Mill W.W.)	The Surveyor, U.D.C.	5	1 6	340	..	17·60	135	98
d Desborough Council School	F. W. Grudgings, Esq.	5	1 0	400	..	19·89	..	..
d Desborough U.D.C. Waterworks	A. Harris, Esq., C.E.	5	0 9	457	..	18·87	..	91
d Barnwell (Lilford Hall)	Lord Lilford	8	1 0	..	..	17·66	..	..
d Oundle (Milton Road)	J. M. Siddons, Esq. C.E.	5	1 6	131	22·3	18·53	..	88
D*OUNDLE (School)	The Headmaster	8	1 0	147	..	18·55	167	95
D Oundle (Nene Wharf)	R. Nene Catchment Bd.	5	1 0	65	..	20·84	139	86
d Peterborough (Woodston)	Central Sugar Co., Ltd.	5	1 0	25	..	(18·94)	(132)	(90)
D Peterborough (Westbourne Ho.)	E. H. Colman, Esq.	5	1 0	35	..	18·55	143	94
D*Peterborough (Abbeyfields)	Major J. Shipley Ellis, J.P.	5	1 0	49	..	19·92	156	92
D*Peterborough (Milton Park)	Mr. E. A. Parker	5	2 0	86	..	20·46	150	96
D Wittering (Whitewater)	E. Betts, Esq.	8	1 0	241	..	18·55	132	104
D Wittering (Bone Mill)	E. Betts, Esq.	8	1 0	..	..	19·28	129	102
D Eye (Northolm)	S. M. Egar, Esq.	5	1 0	17	..	18·67	155	92
D*Eye (Newborough)	R. Williams, Esq.	5	1 0	8	..	17·91	135	94
5.—WELLAND. 96 sq. mi.								
D Market Harboro' (Dingley Hall)	Mr. V. Read*	5	1 6	400	..	20·89	171	116
D Weston-by-Welland	Major N. H. Matthews	5	1 3	254	..	18·87	140	99
d*Rockingham Castle Gardens	Mr. C. Mears	5	1 0	450	..	20·53	..	..
d Easton-on-the-Hill	W. H. Tillson, Esq.	5	0 7	290	23·5	18·87	..	..
D Market Deeping (Etton)	W. H. A. Court, Esq., C.E.	8	1 0	25	..	17·38	130	88
HUNTINGDONSHIRE. (Area, 366 sq. mi.)								
1.—OUSE. 327 sq. mi.								
D St. Neots (The Square)	Miss L. Sibley	5	0 10	50	..	18·34	165	106
D Brampton School	W. T. Carter, Esq.	5	1 0	40	..	14·93	124	90
d Hemingford Grey	G. F. Wilson, Esq.	5	1 6	20	21·9	16·06	..	91

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§ " Ground " is the roof of a reservoir 18 ft. above the general level.

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	HUNTINGDONSHIRE—(*con.*)		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
	1.—OUSE—(*con.*).								
D	St. Ives (Slepe House)	Dr. W. R. Grove	5	1 0	25	22·6	16·41	126	96
D	Huntingdon (Hinchingbrooke)	W. Prowting, Esq.	5	2 0	70	..	16·75	147	103
D	Catworth (School House)	J. H. Annet, Esq.	5	0 9	210	23·7	17·38	145	93
d	Wistow Rectory	Rev. C. C. Pratt	5	2 0	50	..	18·39	..	..
D	Whittlesea Mere	L. I. Clark, Esq.	8	1 6	10	21·4	17·11	131	93
	2.—NENE. 39 sq. mi.								
	BEDFORDSHIRE. (Area, 467 sq. mi.)								
	1.—THAMES—Colne. 20 sq. mi.								
D	Whipsnade Park	The Zoological Society	5	1 1	712	..	20·65	157	120
D	Luton (Stockwood)	Capt. H. C. Ross-Skinner	5	1 0	539	..	19·09	131	103
	2.—THAMES—Lea. 32 sq. mi.								
D	Luton (Pumping Station)	J. W. Tomlinson, Esq., C.E.	5	1 0	343	*25·9*	18·72	154	110
D	Dunstable (Cement Works)	Works Manager	8	1 0	430	..	18·01	145	108
D	LUTON (Wardown Park)	J. W. Tomlinson, Esq., C.E.	5	1 0	381	..	17·56	143	108
D	Luton (The Downs)	G. W. Pryer, Esq.	5	1 0	479	..	17·21	149	113
	3.—OUSE. 408 sq. mi.								
d	Shefford (Stondon Manor)	R. Long, Esq.	5	1 0	241	..	15·62	..	93
D	Hockliffe (Lyndhurst)	C. J. Kilby, Esq.	5	1 0	350	..	18·60	133	103
D	WOBURN (Experimental Farm)	Lawes Agricultural Trust	8	1 0	291	23·9	17·77	151	88
D	Woburn (Fruit Farm, Ridgmont)	E. J. Hobbs, Esq.	5	1 0	270	..	18·70	139	103
D	Letchworth (New Sewage Works)	The Surveyor, U.D.C.	5	1 0	195	..	16·17	135	99
D	Stotfold (Three Co. Mental Hos.)	Dr. L. O. Fuller	5	1 0	220	*23·2*	15·23	128	97
M	Meppershall	W. Ransom & Son, Ltd.	5	0 9	235	..	15·50	..	..
D	Aspley Guise	C. A. C. Bowlker, Esq., M.A.	5	1 0	360	..	22·41	147	110
D	Shefford (Clifton Bury)	W. Inskip, Esq.	5	1 0	137	..	16·53	155	95
D	Shefford Council School	Mrs. R. Alldritt	5	1 0	126	..	18·94	165	98
	Shefford (Stanford)	H. Inskip, Esq.	5	2 0	90	..	16·39	..	..
D	Biggleswade (New Spring P.S.)	T. A. Staniforth, Esq.	5	1 6	180	..	16·41	130	94
D	Sandy (The Lodge)	Mr. R. Pettifer	5	1 0	200	..	18·07	130	105
D	Sandy (Mogerhanger Park)	Dr. C. G. Welch	5	1 0	..	..	17·03	134	99
D	Bedford (Castle Road)	Miss M. E. Newbery	5	7 0	108	..	15·73	134	90
D	Bedford (Bedford Park)	The Borough Engineer	8	1 3	117	..	13·85	124	82
D	Great Barford House	J. Arnold Whitchurch, Esq.	5	1 0	120	..	16·93	128	92
	Sharnbrook (Glen Lui)	L. Stileman-Gibbard, Esq.	5	1 0	220	..	17·10	153	96
	4.—NENE. 7 sq. mi.								
	CAMBRIDGESHIRE. (Area, 859 sq. mi.)								
	1.—STOUR. 17 sq. mi.								
	2.—OUSE. 741 sq. mi.								
D	Ashwell (Odsey)	W. Herbert Fordham, Esq.	5	2 0	256	23·0	17·63	152	97
	Litlington Vicarage	Rev. M. de Courcy-Ireland	8	1 0	80	..	19·99	131	96
D	Guilden Morden Vicarage	Rev. Ll. G. S. Price	5	1 0	140	21·9	17·79	143	97
	Abington Pigotts Hall	Rev. M. de Courcy-Ireland	5	1 0	78	21·8	20·55	147	94
D	Melbourn (Melbourn Bury)	A. R. Fordham, Esq.	5	1 0	90	..	16·71	148	96
D	Meldreth (Chiswick Farm)	A. A. Howard, Esq.	5	1 1	70	22·4	17·92	149	95
d	Whittlesford (Scotts)	Robert Maynard, Esq.	5	0 6	68	22·3	16·60	..	..
d	Wimpole Hall	W. J. Snell, Esq.	5	1 0	141	23·0	16·31	..	94

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CAMBRIDGESHIRE—(*con.*)		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
2.—OUSE—(*con.*)								
D Shelford (Stapleford House)	J. H. H. Linton, Esq.	5	2 3	64	22·3	16·48	122	101
D Balsham Rectory	Rev. H. J. E. Burrell	5	2 6	399	23·0	18·76	121	89
Long Stow	S. Welsford Pain, Esq.	5	1 0	240	..	18·07	..	..
D Grantchester (Lyndewode)	J. Nutter, Esq.	5	1 0	31	22·6	17·59	137	103
D Fulbourn (Fleam Dyke)	Cambridge W.W. Co.	5	1 0	99	21·0	17·47	140	98
D Fulbourn Pumping Station	Cambridge W.W. Co.	5	1 0	37	22·9	17·60	140	97
D Fulbourn (Cambridge Mental Hos.)	The Farm Bailiff.	5	1 6	72	..	20·48	127	99
D Cambridge W.W. (Cherryhinton)	Cambridge W.W. Co.	5	1 0	35	21·6	15·13	119	92
D Cambridge (Barrow Road)†	N. T. Myers Esq.	8	0 10	45	23·8	17·46	140	98
D Cambridge (Corporation Store Yd.)	G. W. Teasdale, Esq., C.E.	5	1 8	52	21·2	15·85	135	90
D CAMBRIDGE (BOTANIC GARDENS)	The Curator	5	1 1	41	21·8	15·92	125	91
D Cambridge (Corporation Ppg. St.)	G. W. Teasdale, Esq., C.E.	5	1 7	28	22·1	15·00	127	92
D CAMBRIDGE (UNIVERSITY FARM)	The Director	5	1 0	81	..	17·17	134	101
d Caxton	Dr. E. P. H. Dudley	5	1 0	170	23·3	15·85	..	96
D Quy Hall	Miss M. S. Francis	5	0 9	23	22·6	17·62	123	100
d Boxworth (Manor House)	E. H. Thornhill, Esq.	5	1 0	76	23·4	21·01?	..	104
d Oakington	A. H. V. Bloom, Esq.	5	1 9	27	..	20·19	..	..
d Burwell (Manor House)	J. G. Faircliffe, Esq.	5	1 0	50	23·0	17·47	..	95
d Cottenham (Bernard House)	Miss K. Bull	5	1 6	30	22·1	18·14	..	100
D Conington (Conington Hall)	P. T. Gardner, Esq.	5	1 0	50	24·7	18·59	115	97
D Fordham (London House)	W. V. Bloom, Esq.	5	1 0	30	21·4	18·29	125	91
D Stretham Engine	E. Stevens, Esq.	5	4 9	13	21·2	16·35	111	91
D Stretham (Orchard House)	Miss Wright	8	4 6	42	22·0	17·16	123	105
D Prickwillow Vicarage	Rev. W. Francis Hicks	5	1 6	5	..	18·14	145	98
D Littleport (Highfield House)	H. G. Martin, Esq.	8	4 0	67	21·3	18·26	129	96
D Chatteris (Aylesby House)	P. A. S. Ruston, Esq.	5	1 6	31	22·5	17·39	111	92
D March	L. I. Clark, Esq.	9	2 0	10	22·8	19·05	112	100
D Upwell (Marmont Priory Lock)	L. I. Clark, Esq.	8	1 1	..	20·6	18·95	143	102
3.—NENE. 101 sq. mi.								
D Stanground Sluice	L. I. Clark, Esq.	8	1 6	15	20·3	18·58	145	98
D Parson Drove (Clows Cross)	W. Kingston, Esq.	8	1 0	6	22·1	17·75	141	105
D WISBECH (Horticultural Station)	Director of Education	5	1 0	10	..	19·74	141	110
D Wisbech (Queen's Road)	C. Dann, Esq.	5	1 6	10	26·3	18·41	145	100
d Wisbech (Tydd Manor)	A. H. Carter, Esq.	5	6 6	..	..	18·51	..	98

DIVISION IV—EASTERN COUNTIES.

ESSEX. (Area, 1,532 sq. mi.)

1.—THAMES.—Lea. 132 sq. mi.								
D West Ham (Abbey Mills)	London County Council.	8	0 10	15	22·3	15·83	127	97
D Leyton (Sewage Works) (+A)	A. P. Howell, Esq., C.E.	5	0 9	22	23·0	17·28	142	100
d Leytonstone (High Road)	Miss G. Lister.	5	1 3	100	24·3	18·89	..	109
D Lea Bridge (Waterworks)	Met. Water Board.	5	1 0	23	..	15·44	125	100
D Walthamstow (Ferry Lane)	Met. Water Board.	5	1 0	40	22·6	16·44	132	100
D Woodford (Haggar Lane)	Met. Water Board.	8	1 0	176	23·0	18·16	145	101
D Buckhurst Hill Reservoir	Met. Water Board.	5	1 0	275	..	17·73	143	105
D Chingford (Crescent Road)	Miss M. L. Mathieson.	5	0 10	200	..	18 75	160	103
D Chingford Mill	Met. Water Board.	5	1 0	40	..	16·76	137	103
D Loughton (High Beech Res.)	Met. Water Board.	5	1 0	376	..	18·07	142	114
D Waltham Abbey (Rammey Marsh)	Met. Water Board.	5	1 0	60	..	16·79	139	96
D Waltham Abbey (Pumping Sta.)	Met. Water Board.	5	1 8	66	..	16·08	149	100
d Waltham Abbey (Gunpr. Fact.)	The Superintendent	5	1 0	64	..	16·12	..	..
D Hatfield Broad Oak (Barrington)	A. H. Gosling, Esq.	5	0 10	300	..	17·98	163	105
Bishop Stortford (Hassobury)	Major W. S. Gosling.	5	0 10	290	..	19·14	148	..
D Stansted (Birchalls)	Mr. W. White.	5	1 0	290	..	19·10	128	115

† Previously at Hills Road.

DIVISION IV—EASTERN COUNTIES—(*con.*).

STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
ESSEX—(*con.*)		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
1.—THAMES—Lea—(*con.*)								
D Elsenham (Gaunts End)	H. Cotterell, Esq.	5	1 0	363	24·6	13·21	139	106
D Stansted (Bentfield Place)	L. D. Gosling, Esq.	5	0 9	300	..	17·90	153	109
2.—THAMES—Roding, etc. 316 sq. mi.								
D Grays (Sewage Works)	The Manager	8	1 0	7	..	15·06	122	88
D Grays (Stanley Road)	Grays U.D.C.	5	3 3	21	..	14·33	111	87
D Rainham (Riverside Sew. Works)	Dagenham U.D.C.	8	1 3	5	19·3	13·64	128	91
D East Ham (Central Park)	The Corporation	8	1 0	15	22·3	17·23	134	104
D East Ham Well	Met. Water Board	5	1 0	17	21·6	16·50	122	105
D Dagenham Sanatorium	The Medical Superintendent	5	1 0	18	19·3	12·37	114	82
d Forest Gate (Monega Road)	C. E. Golding, Esq.	5	0 11	20	22·1	17·84	(153)	(116)
D Ilford Sewage Works	The Borough Engineer	5	1 0	31	..	16·25	138	102
d Leigh (Brick House)	Miss I. Bentall	5	0 10	136	..	15·56	..	95
D South Benfleet (Hillside Road)	H. A. Marshall, Esq.	5	1 0	55	..	14·50	126	92
d Vange Pumping Station	Southend Water Works Co.	5	1 0	43	..	12·60	..	82
d Manor Park (City of L'dn. Cemy.)	The Superintendent	5	0 6	50	22·8	17·28	..	83
d Pitsea Pumping Station	Southend Water Works Co.	5	1 0	28	..	13·41	..	..
D Horndon (Eastern Sew. Works)	W. J. Grant, Esq.	8	1 6	23	..	16·10	138	91
D Hornchurch	Hornchurch U.D.C.	8	1 6	44	..	16·79	141	99
D Wanstead (Red Bridge)	Met. Water Board	5	1 0	45	..	16·19	134	104
D Havering-atte-Bower (Fernside)	Benjamin Smith, Esq.	5	1 0	340	..	19·40	169	123
D Theydon Bois (Thrifts Hill)	H. Kemsley, Esq.	5	1 0	245	..	15·78	140	103
d Theydon Bois (Birch Hall)	Mrs. Gerald Buxton	5	1 0	300	..	15·63	..	98
d Theydon Bois (The Vicarage)	Mrs. M. C. Ames	5	0 10	240	..	18·36	..	107
D Theydon Bois (Fernside)	C. W. Browne, Esq.	5	0 11	300	..	16·00	145	102
D North Weald (Canes)	H. W. Hart, Esq.	5	1 0	250	..	17·82	137	108
3.—CROUCH. 186 sq. mi.								
D Shoeburyness (New Ranges)	The Meteorological Office	8	1 0	11	18·9	14·44	132	79
D Southend (The Cliffs)	The Corporation (Pier Master)	8	1 0	90	19·7	15·62	147	89
D Southend (Kilworth Avenue)	H. J. G. Ralph, Esq.	8	1 0	78	..	15·84	153	94
D Southend (Waterworks)	Southend Water Works Co.	8	1 0	112	21·1	16·43	146	99
D Westcliff-on-Sea	Messrs. Boatman, F.S.M.C.	5	1 0	100	..	15·28	133	91
d Leigh Reservoirs	Southend Water Works Co.	5	1 0	177	..	15·57	..	..
D Shoeburyness (Great Wakering)	Officer-in-Charge	5	1 0	11	18·4	14·80	125	80
D Eastwood Pumping Station	Southend Water Works Co.	8	1 0	50	..	16·20	148	100
D Thundersley Reservoir	Southend Water Works Co.	5	1 0	277	..	14·51	137	97
w Nevendon Pumping Station	Southend Water Works Co.	5	1 0	43	..	14·05	..	..
D Billericay (Service Tank)	Southend Water Works Co.	5	1 0	310	..	13·30	142	94
D Billericay (Ramsden Hall)	T. W. Bacon, Esq.	5	0 9	260	..	15·45	141	103
d Wickford (Runwell Hall)	Miss A. Kemble	5	0 7	75	24·2	14·16	..	89
D Southminster (Dudswell)	Mrs. H. G. Owen	5	1 0	60	..	14·55	115	89
d Southminster (The New Moor)	P. C. Attenborough, Esq.	5	1 6	72	..	12·05	..	..
D Bradwell-on-Sea (Bradwell H.)	H. D. Chillingworth, Esq.	5	4 0	27	20·7	13·69	108	79
4.—BLACKWATER. 425 sq. mi.								
d South Hanningfield (Bearmains)	C. W. Gardner, Esq.	8	1 10	220	..	14·15	..	98
D Ingatestone (Trueloves)	W. Ransom, Esq.	5	1 0	249	..	14·58	149	97
D Ingatestone (Fryerning)	A. E. Christy, Esq.	5	1 0	290	..	14·75	173	99
d Danbury Park Gdns.	The Head Gardener	5	1 6	120	..	13·86	..	92
D Maldon	Town Clerk	5	1 0	14	..	11·57	123	82
Chelmsford (Sandford Mill W.W.)	The Water Engineer	8	5 5	69	..	15·44	..	..
D Writtle (Melbourne)	J. A. Rosling, Esq.	5	0 9	140	..	15·45	149	98
D Chelmsford (County Laboratory)	The Prin. E. Anglian Inst. Ag.	5	1 3	134	22·3	13·71	148	98
d Chelmsford (Little Baddow)	A. L. Woodhouse, Esq.	5	1 0	180	..	13·94	..	99
D Langford (Treatment Plant)	Southend Water Wks. Co.	8	1 5	40	..	13·28	130	87
d Witham (Wickham Hall)	D. B. Smith, Esq.	5	0 10	60	..	12·81	..	..
D Good Easter	The Prin., E. Anglian Inst. Ag.	5	1 0	185	..	15·03	148	93
d Wickham Bishops	Mrs. Fowler	5	1 4	250	..	11·10	..	..

DIVISION IV—EASTERN COUNTIES—(*con.*).

STATIONS.	AUTHORITIES.	Diam.	Rain-gauge Height of Rim above Ground.	Rain-gauge Height of Ground above Sea Level.	Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
ESSEX—(*con.*)		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
4.—BLACKWATER—(*con.*)								
r Tolleshunt D'arcy (Oxley Hill)	H. Campkin, Esq.	5	0 9	100	..	13·43	137	87
D Pleshey Vicarage	Rev. C. H. B. Woodd, M.A.	8	1 3	200	..	14·70	157	102
D Terling Place Gdns.	B. May, Esq.	5	1 2	100	..	13·66	150	99
Witham (Faulkbourne Hall)	Miss C. L. Parker	5	0 8	100	..	13·94	..	..
D Little Leighs (Lavender Leez)	W. C. Neild, Esq.	5	1 2	192	..	14·42	139	102
D Messing Vicarage	Rev. W. G. Whittam	5	2 1	120	..	14·63	145	87
D Kelvedon (Lawn House)	F. Randolph-Symmons, Esq.	5	1 0	96	..	15·26	121	95
D Felsted School	E. H. Lockwood, Esq.	5	0 10	248	*22·9*	15·23	128	96
D Little Dunmow (Throws)	Mrs. D. Hasler	5	0 9	260	..	17·20	139	100
D Great Dunmow	Messrs. Hasler & Co., Ltd.	5	1 0	200	..	16·63	134	98
D Rayne (Staneway)	Mrs. Burt	5	1 1	247	..	16·60	134	99
D Great Bardfield (South Lodge)	A. W. Brunwin, Esq.	5	1 0	250	..	19·17	145	100
5.—COLNE & C. 283 sq. mi.								
d St. Osyth (Wigborough Wick)	P. B. Smith, Esq.	5	2 0	10	..	13·80	..	82
D Clacton-on-Sea	The Town Clerk	8	1 0	55	20·5	15·16	128	79
D Clacton-on-Sea (Hospital Site)	The Town Clerk	5	1 0	55	..	15·01	128	82
D Great Clayton (Clay Hall)	Miss E. A. Smith	5	1 0	45	..	17·51	103	88
d Tiptree (Brook House)	A. Hitchcock, Esq.	5	0 11	120	..	13·23	..	..
D Walton-on-the-Naze	Clerk to the U.D.C.	5	1 0	60	..	16·40	131	86
d Colchester (King's Ford) *new g.*	Cmdr.E.A.Digby,R.N.,K.C.	5	1 0	103	..	14·55	..	85
d Colchester (Hythe Gas Works)	Colchester Gas Co.	8	0 10	12	..	14·39	(151)	(89)
D Colchester (Castle Park)*	H. Collins, Esq., C.E.	8	1 2	87	..	16·00	134	96
D Colchester (Waterworks)	A. Hammond, Esq.	5	1 5	37	..	14·63	122	92
D Lexden (Hill House, S. No. 2)	S. F. Hurnard, Esq.	5	1 0	90	..	14·01	121	80
D Great Bromley (Broughton)	W. A. Roberts, Esq.	5	1 0	115	..	15·25	123	90
D Earls Colne (Grammar School)	The Headmaster	5	1 0	168	..	16·38	135	96
Halstead (Attwoods)	R. E. Vaizey, Esq.	5	1 6	200	..	17·06	136	96
D Halstead (The Brewery)	F. N. Adams, Esq.	5	1 0	140	..	17·08	136	87
Gt. Maplestead (Monk's Hall)	Miss J. Miller	5	1 0	200	..	(16·30)	..	..
D Great Yeldham Hall	G. A. Goodchild, Esq.	5	2 0	200	..	18·76	145	101
6.—STOUR. 110 sq. mi.								
D Dovercourt	Borough Surveyor, Harwich	5	1 0	47	..	15·45	107	81
D Mistley (The Maltings)	Messrs. Brooks (Mistley) Ltd.	8	1 0	25	..	15·87	124	85
7.—OUSE. 80 sq. mi.								
d Widdington Rectory	Rev. Jas. W. Court	5	1 6	340	..	16·26	..	88
d Great Chesterford Mills	E. H. King, Esq.	5	1 0	130	..	18·76	..	..
SUFFOLK. (Area, 1,489 sq. mi.)								
1.—STOUR. 271 sq. mi.								
D East Bergholt (Ackworth Ho.)	A. Harwood, Esq.	8	1 6	145	..	16·37	161	91
d Nayland (Broomfields)	L. M. Russell, Esq.	5	1 0	140	..	12·10	..	..
D Capel St. Mary School	Bernard B. Taylor, Esq.	5	1 6	156	..	16·77	134	94
D Assington Hall	Mr. E. J. Ottaway	5	1 0	200	..	15·23	138	95
D Great Cornard (The Limes)	E. Oliver, Esq.	5	0 9	85	..	16·00	136	99
D Sudbury (Friars St.)	E. Ransom, Esq.	5	1 6	93	*23·5*	16·19	171	91
D Sudbury (Waterworks Stn.)	The Borough Surveyor.	5	2 0	131	..	15·73	108	85
D Hadleigh (Penlands)	E. A. Lee, Esq.	5	1 0	185	..	17·54	148	100
D Waldringfield (Holbrook Hall)	Mrs. F Ramsay	5	1 1	185	..	18·35	132	104
D Clare (Nethergate House)	Lt.-Col. R. C. Bond, D.S.O.	5	1 8	130	..	17·71	152	93
D Hartest (Chadacre Institute)	The Principal	5	1 0	250	..	19·46	146	103
2.—ORWELL. 166 sq. mi.								
D Copdock† (+A)	F. L. Bland, Esq.	8	1 0	164	*24·5*	16·83	139	90
D Ipswich (Colchester Road)††	Alfred G. Glenn, Esq.	5	1 0	145	..	19·18	143	88

* Previously at Borough Surveyor's Office.
† Previously called Ipswich (Rookwd., Copdock).
†† Previously called Roundwood.

DIVISION IV—EASTERN COUNTIES—(*con.*).

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	SUFFOLK—(*con.*)		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
	2.—ORWELL—(*con.*)								
D	Ipswich (Museum)	F. M. Cullum, Esq.	8	1 0	72	..	16·40	140	84
d	Ipswich (All Saints' Vic.)	Rev. S. C. Calver	5	1 5	..	..	16·72	(139)	(88)
D	Ipswich (Dale Hall)	Percy Turner, Esq.	8	1 0	135	..	17·18	135	87
	Elmsett (Laurel Cottage)	A. E. Ladbrook, Esq.	5	2 0	210	..	17·01	..	94
D	Nettlestead (High Hall)	A. S. P. White Cooper, Esq.	5	1 6	236	..	17·12	106	87
D	Coddenham (Shrubland Park)	Mr. A. C. Horton	5	1 6	162	..	18·42	119	101
D	Haughley (Haughley House)	Mrs. S. H. Creagh	5	0 9	180	..	16·65	134	91
D	Haughley (Pine Lodge)	A. A. Geater, Esq.	5	1 6	131	..	18·50	146	104
	3.—DEBEN & C. 466 sq. mi.								
D	FELIXSTOWE (Aerodrome)	(+A) Meteorological Officer	8	1 0	15	20·3	16·38	129	87
D	Waldringfield	Major B. R. M. Glossop	8	1 0	70	..	19·10	140	88
D	Woodbridge Abbey	Col. R. J. Carthew	8	1 2	46	..	19·48	147	98
D	Orford (The Gables)	Miss E. A. Rope	5	1 1	30	..	21·16	157	106
	Melton (Greylands)	Miss Jervis-White-Jervis	5	2 0	50	..	19·56	137	103
D	Melton (St. Audrey's Hospital)	The Clerk and Steward	8	1 2	74	..	18·44	134	88
D	Melton (Bromeswell Rectory)	Rev. F. Shadwell	5	1 5	35	..	19·92	142	96
D	Henley Hall	Mrs. Gascoigne	5	2 0	150	..	19·46	153	112
d	Rendlesham Hall	Mr. H. Long	5	1 6	88	23·1	19·84	..	..
D	Campsea Ashe (High House)	Viscount Ullswater, G.C.B.	8	1 0	60	23·0	21·06	136	99
d	Aldeburgh (Sanditon)	Miss L. Austen-Leigh	..	..	..	..	21·72	..	..
	Charsfield (Red House)	Hugh P. Youngman, Esq.	5	1 9	150	..	20·83	..	..
D	Blaxhall	R. H. Sherwood, Esq.	5	1 0	..	..	21·50	155	103
d	Snape (Green Heys)	Mrs. G. H. Garrett	5	1 1	100	..	22·64	..	91
D	Snape (Wadd House)	Capt. E. H. Buxton	5	1 0	25	..	21·58	142	93
D	Leiston (Lower Abbey)	Miss M. K. Rope	5	1 0	30	..	23·57	151	105
d	Heveningham Hall	Hon. A. Vanneck	5	0 7	100	..	20·26	..	94
D	Southwold	E. G. Naunton Esq.	8	1 0	—1	..	20·85	134	102
D	Halesworth (Highfield)	Admiral F. E. Bruen, C.B.	5	0 6	90	..	21·65	178	107
D	Southwold (Quay House)	Miss P. Corns	5	1 1	30	..	21·33	134	96
D	Halesworth Rectory	Rev. H. C. Newbery	5	1 0	50	..	21·41	153	107
D	Wangford (Ford House)	Hon. Agnes Eden	5	0 10	25	..	22·47	135	97
	Wangford	F. W. Baker, Esq.	5	1 0	11	..	23·11	..	..
D	Wrentham (Sotterley Hall)	M. E. St. J. Barne, Esq.	5	0 10	70	..	22·12	153	95
	4.—YARE & C. 208 sq. mi.								
D	Horham Rectory	Rev. J. E. Soden	5	1 3	175	..	22·82	143	97
D	Yaxley	R. L. T. Clarkson, Esq.	5	1 0	162	..	24·02	166	99
D	Rumburgh Vicarage	Rev. W. Linton Wilson	5	1 0	187	..	19·14	153	85
D	BUNGAY (Flixton Hall)	Sir Shafto Adair, Bart	5	1 0	79	..	19·37	120	103
D	LOWESTOFT (Secondary School)	The Town Clerk	5	1 0	82	23·5	21·93	139	102
D	Lowestoft (Briar Clyffe)	H. Hollingsworth, Esq.	5	0 7	..	..	22·08	140	96
	Blundeston House	L. J. Peto, Esq.	8	1 1	30	..	21·71	..	..
D	Herringfleet House	G. H. Wyllys, Esq.	5	1 0	55	..	22·73	170	106
D	Lound Pumping Station	Lowestoft Water & Gas Co.	8	1 0	34	..	21·70	150	101
D	Hopton (Hopton House)	C. S. Orde, Esq.	6	1 0	..	..	21·09	132	100
D	Fritton Warren	Maj.-Gen. R. Upcher, D.S.O.	5	1 0	42	..	24·44	151	108
D	Fritton Hall	Major A. R. Buxton	8	0 11	30	..	23·82	168	103
D	Yarmouth (Burgh Hall)	H. P. Frederick, Esq.	5	1 0	40	*24·4*	26·82	172	109
	5.—OUSE. 378 sq. mi.								
d	Newmarket (Sewage Outfall)	W. H. Elev, Esq., C.E.	5	1 0	81	..	21·04	..	106
D	Bury St. Edmunds (Southbridge Ho.)	Miss E. M. Branford	5	1 0	100	..	20·84	162	104
D	Bury St. Edmunds (Whiting St.)	Rev. H. I. Kilner	8	0 10	146	..	21·26	154	103
D	Bury St. Edmunds (Westley H.)	Mrs. Burrell	5	1 0	226	25·1	21·75	142	112
d	Bury St. Edmunds (Beet Sugar Factory)	United Sugar Co., Ltd.	5	0 6	159	..	18·29	..	..
D	Fornham St. Martin	Mr. H. Parker	5	1 0	125	..	19·92	143	107
D	Hengrave Hall	Sir John Wood, Bart.	5	1 5	85	*23·1*	21·75	124	101
D	Bury St. Edmunds (Troston Hall)	F. S. Beauford, Esq.	5	1 0	130	..	20·16	151	108
D	Mildenhall	H. R. W. Forster, Esq.	5	1 3	50	..	20·36	128	100
	Barningham (The Beeches)	Miss A. K. Lingwood	5	0 9	136	..	19·57	..	..
D	Elveden Hall	The Earl of Iveagh, C.B.	5	1 0	130	..	19·62	171	115

DIVISION IV—EASTERN COUNTIES—(*con.*).

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NORFOLK. (Area, 2,044 sq. mi.)		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
1.—YARE. 658 sq. mi.								
D Diss (The Cedars)	Dr. H. M. Spiers	5	0 8	108	..	21·01	151	105
D Pulham St. Mary (Brook House)	E. Beevor, Esq.	5	1 0	120	..	22·35	164	112
D Pulham St. Mary (Hill House)	W. G. Rutter, Esq.	5	1 0	120	24·7	22·68	191	117
D Ditchingham	W. G. Rutter, Esq.	5	1 0	25	23·9	22·99	187	116
d Beccles (Raveningham Hall)	N. H. Bacon, Esq.	5	1 6	60	..	(22·33)	(150)	(102)
D Hapton Parsonage	Lt.-Col. H. C. Copeman	5	1 0	100	..	19·77	157	109
D Spooner Row (Wattlefield Hall)	E. F. Routh Clarke, Esq.	5	1 0	161	..	23·27	162	128
D Spooner Row (School)	Owen Potter, Esq.	5	1 0	160	..	22·51	197	129
D Lodden (Chedgrave Manor)	C. E. Dupuis, Esq.	5	1 6	17	24·2	21·80	157	109
D Wymondham (Morley School)	T. E. Ormond, Esq	5	1 0	157	25·3	22·26	180	125
D Wymondham	J. B. Pomeroy, Esq.	5	1 3	118	..	18·46	147	111
D Hingham	F. B. Law, Esq.	5	1 0	193	25·1	22·77	161	115
D Ketteringham	Lt.-Col. R. F. Boileau	5	1 0	135	..	22·54	170	118
D Keswick Old Hall	E. Knight, Esq.	5	1 0	90	26·4	21·63	168	111
D Gorleston (C. G. Station)	Station Officer (M.O.)	8	1 0	5	24·5	22·42	144	95
D Norwich (Carrow Abbey Gar.)	The Misses Colman	5	1 0	40	25·2	20·03	154	108
D Norwich (Southwell Lodge)	J. H. Willis, Esq.	5	1 0	110	25·9	19·93	158	108
D Norwich (Heigham Cemetery)	L. Alan Jewell, Esq.	5	1 2	37	25·5	18·69	147	103
D Thorpe St. Andrew (Pine Banks)	H. J. Jarrold, Esq.	5	1 7	140	..	20·19	147	104
Norwich (Marlingford Hall)	Major E. H. Evans-Lombe	5	1 0	50	26·9	22·37	..	..
D Norwich (Catton Hall)	D. G. Buxton, Esq.	..	1 0	100	..	18·94	143	101
D Sprowston (Oak Lodge)	A. Cozens Hardy, Esq.*	5	1 0	100	25·2	19·67	179	104
d Drayton Hall	C. H. Walter, Esq.	5	1 0	..	26·0	20·81	..	97
D Swanton Morley Rectory	Rev. R. N. Usher	5	1 0	105	24·3	22·77	150	116
D Bylaugh Park	Mrs. Rice	5	1 0	..	24·8	21·97	154	118
D Swanington (Heath House)	P. Norgate, Esq.	5	1 3	101	25·6	21·20	166	122
D East Bilney Hall	K. W. Hervey, Esq.*	5	1 0	140	26·6	23·03	149	117
D Cawston (The Poplars)	H. A. Wells, Esq.	5	0 8	120	26·6	20·83	157	116
2.—YARE—Bure & c. 368 sq. mi.								
d Acle	Miss Davie*	5	0 6	51	25·1	(22·73)	(172)	(108)
D Norwich (Sprowston Church Farm)	Director, Norfolk Ag. Stn.	5	1 0	93	..	19·87	169	101
D Yarmouth (Ormesby St. Michael)	Gt. Yarmouth W.W. Co.	8	1 0	22	26·2	23·29	169	110
D Yarmouth (Scratby)	Harvey Palmer, Esq.	5	1 0	70	..	23·11	151	106
D Coltishall Hall	Rev. H. Rogers.	5	1 6	25	25·5	21·57	158	109
d Aylsham (Rippon Hall)	Rev. A. F. Marsham*	5	0 7	90	..	(20·11)	..	..
D Aylsham (Woodgate Ho.)	Lt. Col. P. W. Purdy*	5	1 0	100	..	20·86	162	117
D Worstead (Lyngate Cottage) (+A)	Miss F. E. Hooper	8	1 3	50	26·5	19·93	156	109
D Hindolveston (School House)	The Headmaster	5	1 0	300	..	19·90	140	100
D Colby School	John Blott, Esq.	5	1 0	50	..	20·07	139	111
D North Walsham (The Paston Sc.)	Major P. Pickford	5	1 0	100	..	20·01	156	107
D Walcott-on-Sea	Lt.-Col. R. S. Hunt, D.S.O.	5	1 0	20	..	19·30	140	112
D Swafield Rectory	Rev. H. Muir	5	0 10	100	25·5	19·77	147	109
D Cromer (Northrepps Hall)	Lt.-Col. C. R. Gurney	5	1 2	225	26·7	20·81	150	119
D Hanworth Rectory	Rev. Wilson W. White	5	0 10	95	..	20·88	155	112
3.—STIFFKEYS & C. 290 sq. mi.								
D Sandringham House Gardens	Mr. T. H. Cook	5	0 9	121	27·0	20·68	153	119
D Thorpland Hall	Miss C. Lee Warner	5	1 0	157	..	23·02	194	124
D Syderstone (The Rectory)	Rev. B. D. Reed	5	1 0	210	..	20·81	152	115
D Cromer (The Warren)	F. H. Barclay, Esq.	5	1 0	101	24·1	19·81	142	116
D Cromer (Howards Hill)	Clerk to the U.D.C.	8	1 0	178	23·8	20·44	146	107
D West Runton	Miss J. Vernon-Harcourt	5	1 0	113	..	18·78	134	100
D Holkham (Longlands)	Earl of Leicester, G.C.V.O.	5	0 10	200	..	19·68	160	116
D Langham Episcopi Vicarage	Rev. John H. Toy*	5	0 6	139	23·2	21·23	156	119
D Sheringham Hall	Miss E. Upcher	5	0 9	130	23·6	19·56	147	105
D Sheringham (Skelding)	F. Hall Smith, Esq.	5	1 0	60	..	20·73	143	106
Sheringham (Old Coastguard Ho.)	Rev. E. C. S. Upcher	5	1 6	20	..	18·90	..	..
D Wells (Holkham Hall)	Earl of Leicester, G.C.V.O.	5	0 3	43	23·1	19·07	162	116
D Hunstanton	The Advancement Assn.	5	1 1	105	..	15·36	147	93

* *Per* Norfolk Rainfall Organisation.

DIVISION IV—EASTERN COUNTIES—(*con.*).

	STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Aver-age Rain-fall.	1933. Rain-fall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
	NORFOLK—(*con.*)		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
	4.—OUSE & C. 709 sq. mi.								
D	Garboldisham Manor	Major E. W. Denny, D.S.O..	8	1 0	70	23·2	20·63	165	92
d	Thetford (Ford Street Gdns.)	Mr. A. Pipe	5	1 0	44	23·4	21·41	..	88
D	Thetford (Kilverstone Hall)	Baron Fisher of Kilverstone	8	1 0	70	21·7	20·19	164	113
D	Thetford (Waterworks)	C. W. Holmes, Esq.	8	1 0	165	23·8	21·25	176	110
d	Attleborough (Quidenham Hall)	Earl of Albemarle	5	1 0	100	24·1	22·53	..	94
D	THETFORD (LYNFORD NURSERY)	Forestry Commission	5	1 0	99	..	20·90	166	118
D	Old Buckenham (The Grange)	W. D. Haughton, Esq.	5	1 1	180	..	20·66	146	111
D	Hargham Hall	Sir H. R. Beevor, Bart. M.D.	5	0 6	100	24·9	20·59	163	102
D	Methwold (Duchy of Lancs. Sch.)	The Headmaster	5	0 9	50	..	19·75	128	95
D	Caston (Flaxmoor)	Lt.-Col. T. S. N. Hardinge..	5	1 1	150	..	20·14	165	106
D	Watton	A. A. Gompertz, Esq.	5	1 0	166	25·7	20·26	146	109
D	Great Cressingham	J. W. Montgomery, Esq.	5	1 0	90	..	22·88	167	114
D	Downham (Dial House)	Messrs. T. H. Wenn & Co.	5	1 6	..	..	19·93	138	105
D	Downham (High Street)	J. M. Jackson, Esq.	5	1 3	16	..	18·66	143	106
d	Outwell (Well Creek Sluice)	L. I. Clark, Esq.	8	2 6	16	22·0	17·72	..	95
D	Wimbotsham School	The Headmaster	5	1 0	43	..	19·05	149	103
D	Wallington Hall	J. L. Luddington, Esq.	5	1 0	58	23·7	19·48	135	107
D	Swaffham (The Villa)	Mr. J. H. Mack	5	0 9	246	26·3	25·75	140	125
d	Swaffham	Messrs. Vynne & Everett, Ltd.	5	2 7	210	..	24·69	(140)	(117)
D	Sporle	T. S. Matthews, Esq.	5	4 0	230	..	24·13	175	123
d	Little Dunham (Dunham Cott.)	Miss S. Blamire	5	0 11	265	27·2	25·11	..	112
D	Wiggenhall (St. Germans Sluice)	L. I. Clark, Esq.	8	1 6	..	23·1	20·46	150	115
D	East Winch (Holland House)	J. C. Cottam, Esq.	5	1 6	55	23·3	21·37	161	108
D	Terrington St. Clement (C. Sch.)	Miss Shackcloth*	5	0 8	10	..	19·44	104	89
D	Gayton Waterworks	J. C. Matthew, Esq., C.E.	5	1 0	131	..	21·30	147	107
d	King's Lynn (Manure Works)	J. Brown, Esq.	5	1 2	10	..	18·78	..	..
D	Tittleshall	Capt. H. G. Buxton	5	1 6	285	26·8	23·06	160	125
D	Grimston (School House)	J. R. Steward, Esq.	5	1 2	62	..	20·85	161	100
	5.—NENE. 19 sq. mi.								
D	Emneth (Inglethorpe Manor)	F. M. Bland, Esq.	5	1 0	6	22·4	19·25	166	114

DIVISION V—SOUTH-WESTERN COUNTIES.

WILTSHIRE. (Area, 1,375 sq. mi.)

	1.—LOWER AVON. 386 sq. mi.								
D	Westbury (Braemar)†	Mrs. F. D. Richards	5	1 0	190	..	25·26	145	101
D	Market Lavington (Old House)	Miss A. Pleydell Bouverie..	5	0 9	290	29·0	24·98	139	106
	Gt. Cheverell (Timoleague)	Rev. H. S. Travers	5	0 6	360	..	23·85	..	..
D	Easterton (Kestrels)	R. Lake, Esq.	5	1 0	370	..	23·70	142	109
D	Trowbridge (Town Hall)	The Engineer	8	1 2	131	..	23·56	148	101
D	Bradford (Winsley Manor)	E. W. Knatchbull, Esq.	5	0 8	400	29·9	24·29	144	101
D	Bradford (Manvers House)	Dr. C. E. S. Flemming	5	1 3	130	29·9	25·94	144	108
D	Seend (Cleeve House) (R)	Lt.-Col. W. C. Heward Bell.	8	1 0	160	27·5	22·61	153	103
D	Holt (The Retreat)	A. V. H. Beaven, Esq.	5	1 0	145	30·3	25·51	130	111
d	Devizes (Wilts Co. Mental Hosp.)	Dr. S. J. Cole	8	2 5	395	..	25·23	..	..
D	Devizes (Broadleas)	W. H. L. Ewart, Esq.	5	1 0	400	..	25·09	159	103
D	Devizes (Highclere)	The late H. W. Green, Esq.	5	1 6	450	28·3	24·80	147	106
D	Rowdiford Gardens (R)	Mrs. R. E. S. Thomas	8	2 0	..	..	24·28	142	103
D	Great Chalfield	Major R. F. Fuller	5	1 2	165	28·6	23·34	144	105
D	Little Chalfield	Miss C. E. Baker	5	1 0	180	..	22·89	163	109
D	Bowood House	The Marquess of Landsowne, K.G., P.C.	5	0 4	306	..	25·27	142	113
D	Calne (Castleway)	E. W. Brown, Esq.	5	1 0	250	28·9	25·45	153	118
D	Calne (Compton Bassett Gdns.)	The late Mr. H. Welch	5	0 10	384	30·7	27·86	146	122
D	Chippenham (Monkton Park)	Lord Methuen	5	1 0	200	..	27·50	142	98
	Chippenham (Kington Langley)	Mrs. Charles Garnett	8	1 0	172	30·3	27·03	..	..
D	Grittleton	Lt.-Col. Sir A. D. Neeld, Bt., D.L., C.B.	..	..	..	..	29·15	137	109
D	Wroughton (Basset Down Ho.)	Mrs. Arnold Forster	5	1 0	500	29·8	27·41	140	108
D	Tockenham Manor	Major G. J. Buxton	5	1 0	400	..	24·04	147	109

† Previously at Cambridge House.

* Per Norfolk Rainfall Organization.

DIVISION V—SOUTH-WESTERN COUNTIES—(*con.*).

STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
WILTSHIRE—(*con.*)		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
1.—LOWER AVON—(*con.*)								
w Luckington Court	Col. Sir E. Johnson-Ferguson, Bt.	5	0 8	400	30·2	27·03	..	..
D Sherston School	The Headmaster	5	1 0	375	..	27·62	144	100
D Malmesbury (Burton Hill Ho.) (R)	H. L. Storey, Esq.	8	4 0	240	..	21·94	152	100
d Malmesbury (Lea House)	Rev. H. Milnes-Walker	5	1 6	260	..	24·41	..	106
D Malmesbury (Easton Grey)	Mr. P. A. Day	5	1 0	355	31·6	27·86	149	111
2.—STOUR. 33 sq. mi.								
D Mere (Charnage)	A. R. White, Esq	5	1 6	426	33·8	25·77	167	116
D Stourhead	Sir H. H. A. Hoare, Bart	5	1 0	583	38·1	32·89	155	114
D Kilmington Rectory	Rev. H. G. Fox Strangways*	5	1 6	710	39·8	34·36	182	121
3.—EAST AVON. 554 sq. mi.								
D Longford Castle Gardens	The Earl of Radnor	5	1 0	139	31·4	25·81	157	107
D Salisbury (Harnham)	E. F. Taunton, Esq., Junr.	5	1 0	200	..	26·82	179	111
D Fonthill Gifford (Beckford Lodge)	H. B. Cooper, Esq.	5	1 9	500	..	28·28	140	118
D Fonthill House Gardens	Hugh Morrison, Esq.	5	1 0	400	37·8	32·37	146	121
D Salisbury (Manor Road)	Miss L. C. D. Awdry	5	1 0	250	29·2	25·32	147	111
D Salisbury (Atherton House)	Wilfrid Fletcher, Esq.	5	1 0	250	30·4	25·14	160	104
d Salisbury (Newlands)	Dr. T. W. Newton Dunn	5	1 0	175	..	23·33	..	102
D Stratford-sub-Castle (Manor Ho.)	Miss F. Carpenter	5	0 9	168	28·3	25·70	141	102
D Woodford Vicarage	Rev. M. I. Holme	5	0 10	200	..	26·47	173	107
D Porton (W.D. Exp'l. Stn.) (+A)	Meteorological Officer	5	1 0	363	26·5	23·21	136	95
D Steeple Langford (Woodstock)	Miss A. J. Powell	5	1 0	257	..	23·93	148	111
D Maiden Bradley House	The Duke of Somerset	5	1 0	620	38·4	31·10	129	116
D Maiden Bradley	R. Luff, Esq.*	4	3 0	600	..	28·22	122	114
D Amesbury (Boscombe Down Aero.)(+A)	Meteorological Officer	8	1 0	417	..	22·85	136	95
D Heytesbury	Dr. Hammond T. Hinton	5	1 0	300	31·7	25·38	161	106
D Warminster (Henford)	Mrs. Robinson	5	1 8	400	..	27·88	147	119
d Warminster (St. John's Lodge)	D. Vesey, Esq.	5	1 6	400	..	(25·10)	..	..
D Larkhill (School of Artillery) (+A)	Meteorological Officer	5	1 0	440	25·5	21·82	140	96
D Warminster (Smallbrook Ho.)	G. E. Vicary, Esq.	5	0 8	420	..	25·15	139	96
D Orcheston St. Mary	Mrs. Smith	5	0 9	285	..	25·43	158	111
d Marlborough (Wilcot Manor)	Lady Ernest St. Maur	5	1 0	400	..	(25·32)	..	..
D Bishops Cannings	A. J. Combes, Esq.	5	1 0	446	30·3	24·53	152	111
4.—TEST. 77 sq. mi.								
D Landford (Northlands)	Cedric R. Boult, Esq.	5	1 0	180	30·7	26·06	141	103
D West Grimstead	W. W. Wadsworth, Esq.	5	1 0	250	..	26·36	136	101
D Ludgershall (Conholt Park)	E. A. Wigan, Esq.	8	1 0	800	33·9	26·77	152	110
5.—THAMES—Kennet. 169 sq. mi.								
D Bishops Cannings (Shepherds Shore)	C. G. Barrett, Esq.	8	2 1	564	..	26·65	151	107
D Marlborough (College)	The Headmaster	5	1 0	424	31·1	26·55	157	107
Marlborough (Salisbury Road)	E. Kinder, Esq.	5	1 11	450	..	27·04	..	..
D Aldbourne (Manor House)	Capt. W. Brown, J.P.	5	1 1	435	..	26·41	159	114
D Aldbourne (Upham House)	Lady Currie	5	1 2	881	30·3	28·15	129	109
6.—THAMES—Cole & c. 156 sq. mi.								
D Wroughton (Swindon W.W.)	J. B. L. Thompson, Esq., C.E.	5	1 2	448	..	26·44	153	115
D Chiseldon (Hodson House)	A. Ashford, Esq.	5	0 9	560	29·0	24·73	156	112
D Swindon (Commonweal Sec. Sch.)	The Headmaster	5	1 0	469	..	26·46	172	120
D Swindon (Town Gardens)	J. B. L. Thompson, Esq., C.E.	5	1 4	471	27·5	23·78	152	109
D Purton (Restrop House)	Col. A. Canning	5	1 3	444	27·7	25·46	140	108
d Fairford (Marston Hill)	Maj. R. Hamilton Stubber,	5	0 10	350	..	21·55	..	103

* *Per* Mid-Wessex Rainfall Association.

DIVISION V—SOUTH-WESTERN COUNTIES—(*con.*).

STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
DORSETSHIRE. (Area, 988 sq. mi.)		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
1.—PARRETT. 61 sq. mi.								
d Evershott (Melbury House)	Mr. W. G. Lee	5	2 0	460	38·7	33·57	..	100
D Chedington Court	Sir Henry Peto, Bart	8	1 0	605	38·5	29·58	143	95
D Sherborne Castle	Mr. Edwin Hill	5	1 0	195	32·5	26·84	146	116
D Sherborne (Crendle Court)	A. Tyrwhitt Drake, Esq.	5	0 9	380	..	26·58	132	105
D Sherborne (Barton Gardens)	C. E. Bean, Esq., C.E.	8	1 0	285	..	24·96	142	102
Sherborne (Castleton)	Reading T. Grantham, Esq.	5	1 0	220	31·8	27·47	..	..
2.—AXE. 25 sq. mi.								
D Broadwindsor (Blackdown Ho.)	Lt.-Col. C.E.St.J.Harris-St.John	5	0 8	530	..	28·82	148	105
d Forde Abbey	G. D. Roper, Esq.	5	0 10	200	37·7	29·26	..	91
3.—FROME & C. 502 sq. mi.								
D Portland Bill (Lighthouse) *new g.*	Lightkeeper (M.O.)	8	1 0	32	..	21·57	136	97
d Portland (H.M. Naval Depot)	The Works Officer	8	1 0	25	..	23·34	(140)	(97)
D Weymouth (Lansdowne Villa)	Paym.-Capt. T. Seaman, R.N.	5	7 0	100	..	21·11	132	100
D Weymouth (Westham)	The Town Clerk	5	1 0	20	28·0	20·69	127	95
D Weymouth (Springfield)	Major J. H. C. Devenish	5	1 3	96	27·9	20·72	142	102
D Radipole (Abbots Court)	C. E. M. Pinney, Esq.	5	0 9	58	..	21·34	127	98
D Chickerell (Montevideo)	Mrs. N.M. Richardson, O.B.E.	5	1 0	100	28·9	21·06	163	97
D Tyneham House	Mrs. W. H. Bond	8	1 0	255	32·8	23·58	133	97
D Steeple (Manor House)	Major F. H. Swann	5	1 0	231	34·8	25·79	140	109
D Creech Grange	J. W. G. Bond, Esq., C.B.	5	1 0	228	37·1	25·84	134	90
D Langton Herring (The Manor)	E. A. Sparks, Esq.	5	1 0	160	..	21·97	150	107
d Winfrith Rectory	Rev. C. S. Pugh	5	3 0	200	..	24·62	..	98
D Abbotsbury (West Street)	J. C. P. White, Esq.	5	1 6	147	29·2	23·23	128	99
D Abbotsbury (Cotoneaster)	A. H. White, Esq.	5	1 0	157	..	22·46	139	101
D Upwey (Friar Waddon)	R. Davison, Esq.	5	1 0	215	..	25·34	127	102
D Upwey (Higher Well)	R. Davison, Esq.	8	1 0	289	..	25·53	130	96
D Wareham (East Holme)	Miss L. S. Bond	5	1 0	23	33·9	25·01	127	93
D Wareham (The King's Barrow)	Major R. Feilden	5	1 4	15	31·8	25·16	157	95
D Wareham (Binnegar Hall)	Mr. J. W. Hayward	5	1 0	65	33·8	25·72	131	97
D Wareham (Stockford)	W. Bond, Esq.	8	0 11	65	33·4	24·85	148	98
D Wareham (Trigon)	Mrs. L. Sturdy	8	1 4	60	32·1	23·82	138	99
D Dorchester (Littlemayne)	E. R. Sykes, Esq.	5	1 0	200	..	24·88	126	86
D Dorchester (Kingscote)	Mrs. H. M. Ffooks	5	1 0	226	38·3	27·42	146	103
D Dorchester Waterworks	H. D. Strange, Esq.	8	1 0	314	36·6	28·10	144	100
D Dorchester (Stinsford)	J. Wyndham Hull, Esq.	5	0 10	207	37·4	27·44	139	101
Dorchester (Birkin House)	Col. W. H. F. Weber, C.M.G., D.S.O.	5	1 0	230	37·4	27·80	136	102
D Puddletown (Clyffe Ho.) (A)	Maj. W. Van de Weyer	8	4 0	200	..	23·43	141	102
D Poole (+A)	Medical Officer of Health	6	1 8	18	..	22·49	134	90
D Poole (Pitwines Gasworks)	P. G. G. Moon, Esq.	8	1 0	8	..	23·65	130	85
D Poole (Holton Heath R.N. Cordite Fac.)	The Superintendent	8	1 0	64	..	22·28	131	89
D Parkstone (Firgrove)	F. R. Wadman, Esq.	5	1 0	175	28·6	21·50	150	99
D Parkstone (Rosemead)	S. Hyla Greves, Esq.	5	1 0	172	..	24·87	134	96
D Parkstone (Parkside Road)	H. Blanchard, Esq.	8	1 2	150	..	22·67	129	91
d Parkstone (St. Osmund's Road)	A. D. Stables, Esq.	5	1 3	60	32·2	25·61	..	99
D Parkstone (The Laurels)	J. N. Blanchard, Esq.	5	1 2	115	..	22·22	126	91
d Branksome (Bourne Valley)	P. G. G. Moon, Esq.	8	1 3	84	30·0	21·97	120	89
D Branksome (Alderney Res.)	P. G. G. Moon, Esq.	8	1 3	213	..	23·51	138	102
D Broadstone (Sewage Works)	J. Bantten, Esq.	5	1 0	26	29·2	20·43	135	91
D Lyme Regis (Horn Bridge)	E. T. Stoward, Esq.	5	1 0	83	33·2	27·92	146	104
D Lyme Regis (Rotherfield)	Rev. E. J. Synge	5	1 0	145	34·3	27·85	169	111
d Lyme Regis (Overton)	C. Wanklyn, Esq.	5	0 10	400	30·9	27·43	..	109
D Bridport (Coneygar)	Bridport Waterworks Co.	5	1 0	110	32·9	25·23	156	115
D Bridport (Symondsbury)	P. G. Fry, Esq.	5	1 0	83	..	24·00	149	101
D Bridport (Ryall)	W. T. Bridges, Esq.	5	1 0	460	..	26·97	142	103
D Tolpuddle Parsonage	Mrs. Ashton Radcliffe	5	1 0	100	32·9	25·96	143	107
D Puddletown Vicarage	Rev. Canon A. L. Helps	5	4 6	200	35·8	28·14	133	103
D Bere Regis (Barrow Hill)	A. E. Lucas, Esq.	5	1 0	120	32·9	23·78	123	93
D Bere Regis (Bloxworth House)	F. G. A. Lane, Esq.	5	1 6	118	33·7	26·72	137	102
D Broadstone (Grange Road)	E. Nimmo, Esq.	5	1 0	160	..	22·19	139	90

DIVISION V—SOUTH-WESTERN COUNTIES—(*con.*).

STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
DORSETSHIRE—(*con.*)		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
3.—FROME & C.—(*con.*)								
D Wynford House	Lt.-Col. Lord Wynford, D.S.O.	5	1 0	410	43·5	34·89	170	121
D Netherbury (The Chantry)	Lt.-Col. H. L. Kitson	5	1 0	150	35·2	28·65	157	107
d Stoke Abbott (Brimbley Coombe Farm)	Mrs. A. Peto	5	1 0	550	..	31·71	..	..
D Beaminster (Farrs)	Fiennes Trotman, Esq.	5	1 0	183	37·6	31·02	158	105
D Minterne	Col. The Lord Digby, D.S.O.	5	1 0	800	..	28·41	167	103
4.—STOUR. 388 sq. mi.								
D Wimborne (Corfe Mullen W.W.)	G. V. Sparrow, Esq., C.E.	5	1 0	81	32·9	24·05	121	101
d Wimborne (Corfe Mullen, For. Hill)	E. Philip Belben, Esq.	8	1 0	300	32·5	24·09	..	91
D Winterbourne (Whitchurch Vic.)	Rev. H. H. Tilney Bassett	8	1 0	240	35·8	26·70	116	100
D Sturminster Marshall	F. Hewitt, Esq.	8	1 0	85	32·6	24·42	135	107
D Wimborne (Stapehill)	W. J. Marchant, Esq.	5	1 0	95	..	23·82	131	97
D Wimborne (Walsford Bridge P.S.)	P. G. G. Moon, Esq.	8	1 3	70	..	24·04	129	97
D Wimborne (Melbury Lodge)	Rev. W. S. Clarke	5	1 6	150	..	24·30	120	92
D Wimborne (Codford House)	G. H. Batterbury, Esq., M.D.	5	0 11	69	34·5	22·60	148	89
D Wimborne (Uplands)	E. Percy Sugden, Esq.	5	0 10	..	..	23·23	132	94
D Blandford (Field's Oak)	Lt.-Col. H. S. Woodhouse	5	1 0	..	34·4	27·07	151	104
D Blandford (White Cliff St.)	E. Westcott, Esq.	5	1 0	152	..	26·58	136	103
D Blandford (King's Road)	D. Blanchard, Esq.	5	1 0	195	..	25·68	150	98
D Blandford (Bryanston Gdns.)	Mr. J. Jaques	5	1 0	185	..	28·21	139	113
D Blandford (Letton)	Brig.-Gen. B. F. B. Stuart, C.M.G.	8	1 8	240	..	25·05	123	97
D Glanville's Wootton (Manor Ho.)	H. B. Debenham, Esq.	5	0 9	350	35·2	26·45	155	115
D Holwell (Westrow House)	Miss H. B. Warry	5	1 0	252	34·4	26·30	138	111
D Wimborne St. Giles (St. Giles Ho.)	The Earl of Shaftesbury, K.P.	5	1 0	165	33·4	26·67	132	101
D Gussage St. Michael Manor	Mrs. Good	5	1 4	200	33·3	27·78	157	111
D Childe Okeford Manor	J. H. L. Glasbrook, Esq.	5	1 0	250	..	26·70	128	101
D Iwerne Minster (Preston House)	Major H. W. Aston	5	1 0	220	33·2	26·12	133	102
D Iwerne Minster Vicarage	Rev. R. A. Bond	5	1 3	234	..	26·11	136	103
D Sturminster Newton	Louis Dawes, Esq.	5	1 0	225	..	28·25	138	104
D Fontmell Magna (Glebe Cottage)	Dr. J. Appleyard	5	1 0	300	..	25·45	129	96
D Stalbridge School	W. Lovell, Esq.	5	0 8	268	..	26·84	143	99
D Marnhull	W. Gaye, Esq.	..	..	220	..	26·73	132	95
Pentridge (Cobley)	F. B. Eastwood, Esq.	5	1 0	500	..	26·83	..	..
D Cann	Miss G. A. Macdonell	5	1 0	600	..	25·82	144	102
D Fifehead Magdalen	H. Wells, Esq.	5	1 0	500	..	27·27	141	105
D SHAFTESBURY (C.E. School)	The Headmaster	5	1 0	722	32·5	24·65	130	111
D Bourton	H. H. Genge-Andrews, Esq.*	8	1 0	300	..	26·15	141	107
5.—EAST AVON. 12 sq. mi.								
SOUTH DEVONSHIRE. (Area, 1,707 sq. mi.)								
1.—PARRETT. 7 sq. mi.								
2.—TAMAR & C. 395 sq. mi.								
d Plymouth (Boveysand Lodge)	Rev. J. F. Case	5	1 6	75	34·1	28·63	..	122
D§PLYMOUTH (MT. BATTEN AERO.) (+A)	Meteorological Officer	8	1 0	82	..	27·03	166	113
D PLYMOUTH (THE HOE) ....+(A)	H. Victor Prigg, Esq., C.E.	8	1 0	117	36·7	30·78	169	124
D Plymouth (Drake's Reservoir)	F. Howarth, Esq., C.E.	5	1 0	149	37·5	28·74	164	123
D Plymouth (Freedom Park) (+A)	H. Victor Prigg, Esq., C.E.	8	1 0	208	39·4	31·40	176	137
D Devonport (Admiralty House)	Commander-in-Chief	5	1 0	76	..	30·05	169	133
D Devonport (Rowdens Res.)	F. Howarth, Esq., C.E.	5	1 0	201	35·1	28·36	161	119
D Plymouth (Hartley Reservoir)	F. Howarth, Esq., C.E.	5	1 0	321	39·9	34·14	163	128
D Bickley (Roborough Reservoir)	F. Howarth, Esq., C.E.	5	1 0	548	46·2	39·25	174	133
D Lee Moor House	R. Martin, Esq.	8	1 0	900	62·4	54·53	196	164
D Roborough (Maristow Gdns.)	G. F. Hedger, Esq.	5	1 0	80	..	41·71	167	140
D Yelverton (Oakfield)	H. Edgcumbe, Esq.	5	1 0	535	51·8	44·91	186	148
D Sheepstor (Redstone)	F. Howarth, Esq., C.E.	5	1 0	760	59·0	47·12	195	146
D Sheepstor (Burrator)	F. Howarth, Esq., C.E.	5	1 0	755	59·1	45·91	195	148
D Sheepstor (Head Weir)	F. Howarth, Esq., C.E.	5	1 0	720	57·0	47·68	195	145
D Dousland Reservoir	F. Howarth, Esq., C.E.	5	1 0	721	51·8	44·89	181	146
M Dartmoor (Deancombe Farm)	F. Howarth, Esq., C.E.	5	1 0	807	..	48·00	..	..
D Dartmoor (Lowery)	F. Howarth, Esq., C.E.	5	1 0	899	..	39·96	195	145
M Dartmoor (Leather Tor Farm)	F. Howarth, Esq., C.E.	5	1 0	910	59·0	42·80	..	..
M Dartmoor (Siward's Cross)	F. Howarth, Esq., C.E.	5	1 0	1074	..	48·00	..	..
D Whitchurch (Grenofen)	H. Chichester, Esq.	5	1 2	325	46·1	41·22	181	147

* Per Mid-Wessex Rainfall Association. § Exposure not orthodox.

DIVISION V—SOUTH-WESTERN COUNTIES—(*con.*).

STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Rain-gauge: Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
SOUTH DEVONSHIRE—(*con.*)		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
2.—TAMAR & C.—(*con.*)								
D Whitchurch (Langstone)	F. J. R. Coleridge, Esq.	5	1 0	700	51·4	45·80	162	134
D Whitchurch (Holwell)	F. C. Radcliffe, Esq.	5	1 2	500	..	44·07	176	146
D TAVISTOCK	W. J. Monk, Esq.	5	1 0	457	47·6	43·95	179	143
D Horrabridge (Furzetor)	Col. M. C. Collier	8	0 11	550	..	45·08	187	144
D Tavistock (The Library)	The Librarian	8	1 8	282	44·8	38·37	164	141
M Dartmoor (Double Waters)	F. Howarth, Esq., C.E.	5	1 0	1165	64·2	52·70	..	..
M Dartmoor (N. Hessary Tor)	F. Howarth, Esq., C.E.	5	1 0	1398	..	50·10	..	..
D Mary-Tavy (Blackdown)	H. K. G. Rogers, Esq.	5	1 0	855	..	47·22	177	150
N. Brentor (Langstone)	H. Curtis Gallop, Esq.	5	..	700	..	42·40	..	..
D Coryton Manor	R. L. Newman, Esq.	5	1 2	450	43·5	36·07	163	137
D Lifton (Tulip Trees)	R. H. Arundell, Esq.	5	1 2	350	..	38·58	193	135
D Lew Down (Coombe Trenchard)	H. M. Sperling, Esq.	5	1 0	450	44·0	36·45	173	143
D Lydford (Naseby)	Col. H. E. Molesworth, C.M.G., D.S.O.	5	1 0	950	..	44·19	176	150
D Werrington Park	Mr. R. M. Gregory	5	4 8	600	..	34·21	176	142
D Ashwater Rectory	Rev. G. D. Melhuish	5	1 0	500	43·0	31·79	158	131
D Holsworthy (Bodmeyric)	W. J. Rogers, Esq.	5	2 1	450	..	32·53	163	157
3.—ERM & C. 217 sq. mi.								
D Salcombe (Blackstone Lodge)	The late W. J. Shaw, Esq.	5	1 6	280	34·8	31·24	157	117
d SALCOMBE	Borough Surveyor	5	1 0	39	34·7	29·95	..	..
D Salcombe (Fairhaven)	C. Shillitoe, Esq.	5	1 0	150	..	30·90	160	117
D West Alvington	Rev. H. C. B. Lethbridge	5	1 0	180	..	30·83	156	118
d Kingsbridge	W. N. Patey, Esq.	5	1 6	150	..	31·66	..	111
D Stoke Fleming (Windward)	Miss E. L. Garrett	5	1 0	380	..	38·85	157	127
D Yealmpton (Torre)	Miss M. Wimbush	5	0 11	100	35·5	33·77	181	140
D Yealmpton (West Park)	D. M. Yonge, Esq.	5	1 3	150	..	34·71	178	136
D Ermington (Strode)	Capt. H. Gore Hawker	5	1 0	75	41·4	33·93	172	146
D Ivybridge (Filham House)	H. Alger, Esq.	5	1 0	160	46·0	36·32	169	135
D Wrangaton (Plymouth M. Hos.)	H. Victor Prigg, Esq., C.E.	5	1 0	607	54·2	30·54	149	121
D South Brent (Beechfield)	Miss Kingwell	5	1 0	500	61·0	49·08	170	136
D South Brent (Badworthy)	Miss D. B. Latham	5	1 2	550	64·4	55·96	164	138
d South Brent (Didworthy San.)	The Medical Officer	5	1 0	675	..	(53·08)	..	..
Cornwood (Yealm Head No. 5)	W. H. Thompson, Esq., C.E.	5	1 0	540	..	50·82	179	152
Cornwood (Yealm Head No. 1)	W. H. Thompson, Esq., C.E.	5	1 0	943	..	57·63	..	..
§Cornwood (Yealm Head No. 2)	W. H. Thompson, Esq., C.E.	5	1 0	1305	..	54·60	..	..
Cornwood (Yealm Head No. 4)	W. H. Thompson, Esq., C.E.	5	1 0	1415	..	54·59	..	..
§Cornwood (Yealm Head No. 3)	W. H. Thompson, Esq., C.E.	5	1 0	1416	..	52·48	..	..
4.—DART. 197 sq. mi.								
D Dartmouth (Ridge Hill)	Dr. H. J. Campbell	5	1 0	120	40·3	36·19	161	119
d Dartmouth (Naval College)	The Curator, Science Lab.	8	1 0	220	..	35·19	..	..
D Churston Ferrers (Greenway)	Mrs. C. Williams	5	0 9	..	40·8	36·67	138	119
Brixham	Torbay Paint Co., Ltd.	8	0 10	164	..	28·72	..	..
D Brixham (Combe Bank)	Sir H. Clayton, Bt.	5	6 6	115	36·7	32·76	163	111
D Waddeton Court	Sir A. L. Goodson, Bart.	5	1 0	175	40·5	34·52	137	112
D Stoke Gabriel (Maisonnette)	Edward Stobart, Esq.	5	1 0	100	42·8	37·91	151	125
d Totnes (Dundridge Gardens)	Mr. C. K. Pugsley	5	1 0	250	48·3	39·28	..	..
D Paignton Vicarage	Rev. Preb. H. M. Drake	5	1 0	42	35·4	30·80	138	115
D PAIGNTON (Victoria Park)	Town Council (C. Bellinger)	8	1 1	12	..	29·53	150	116
D Paignton (Claylands)	G. M. Rosling, Esq.	8	1 2	150	35·7	31·25	155	113
D Totnes (Walrond House)	W. J. Toope, Esq.	5	1 2	40	41·8	39·01	142	118
D Totnes (Dartington Hall)	J. B. E. Patterson, Esq.	5	1 0	175	..	37·23	158	117
D Totnes (Staverton)	J. A. Devenish, Esq.	5	0 11	50	..	36·07	134	108
d Broadhempston (Sneydhurst)	H. S. Burbery, Esq.	5	1 6	200	..	(36·36)	(153)	(112)
D Ipplepen Vicarage	Rev. R. D. Cooke	5	1 0	266	36·8	34·99	148	117
D Holne (Church Park Cottage)	L. W. Frost, Esq.	5	1 6	620	59·8	54·12	170	137
D Ashburton (West St.)	W. T. Hannaford, Esq.	5	1 0	260	..	42·88	173	129
D Ashburton (Hele House)	E. M. Dowson, Esq.	5	1 0	350	49·6	43·49	167	138
D Dartmoor (Fox Tor)	E. Rowlands, Esq., C.E.	8	0 7	1160	..	55·46	165	148
D Dartmoor (Swincombe)	E. Rowlands, Esq., C.E.	8	0 7	1120	..	54·52	165	147
D Princetown (Huccaby House)	Lt.-Col. H. H. Joll, D.S.O.	5	1 0	900	54·6	47·38	167	144
D Princetown (Wydemeet)	Colin M. E. May, Esq.	5	1 0	900	58·2	53·13	173	154

§ Gauge over-exposed on moor.

DIVISION V—SOUTH-WESTERN COUNTIES—(*con.*).

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SOUTH DEVONSHIRE—(*con.*)		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
4.—DART—(*con.*)								
D PRINCETOWN (H.M. Prison) .(+A)	The Governor	5	1 0	1359	81·9	69·07	185	158
W Dartmoor (Cowsic Valley) *new g.*	F. Howarth, Esq., C.E.	5	1 0	1323	..	58·58	..	..
M Dartmoor (White Tor) *new g.*	F. Howarth, Esq., C.E.	5	1 0	1439	..	55·80	..	..
M Dartmoor (Devil's Tor) *new g.*	F. Howarth, Esq., C.E.	5	1 0	1570	..	57·10	..	..
M Dartmoor (Cowsic Head) *new g.*	F. Howarth, Esq., C.E.	5	1 0	1465	..	57·55	..	..
D Postbridge (Warren House Inn)	S. C. Chapman, Esq., C.E.	5	1 0	1400	..	48·86	156	142
5.—TEIGN. 209 sq. mi.								
D Torquay (Middle Lincombe Rd.)	Miss L. M. Brown	5	1 0	250	30·9	26·08	151	108
D TORQUAY (Abbey Park)	The Corpn. (C. Bellinger)	5	1 0	27	33·0	27·17	151	114
d Torquay (Abbey Road)	Henry Brown, Esq	5	1 0	125	34·3	28·23	(143)	(115)
D Bickington (Higher Goodstone)	Com. W. A. A. Bolitho, R.N.	5	1 0	400	..	36·25	165	129
D NEWTON ABBOT (Seale Hayne Coll.)	The Principal	5	1 0	375	34·7	31·97	156	112
D Teignmouth (Woodlands)	S. B. Harris, Esq.	8	1 2	98	31·5	28·30	151	105
d Teignmouth (Fontigary)	John F. Caley, Esq.	5	1 0	260	30·1	29·51	..	..
D Teignmouth (Landscore Road)	Dr. E. E. Moore	5	1 0	143	31·8	28·81	148	107
D TEIGNMOUTH (Den Gardens)	Medical Officer of Health	8	1 0	20	31·8	28·57	141	104
D Teignmouth (Hazledown Res.)	G. F. Rossiter, Esq.	8	1 0	425	32·4	32·47	147	114
D Teignmouth (Shaldon Res.)	G. F. Rossiter, Esq.	5	1 0	213	34·9	33·86	148	121
D Teignmouth (Landscore Res.)	G. F. Rossiter, Esq.	8	1 0	133	33·2	31·25	148	111
D Bovey Tracey (Whiddon)	G. F. Wright, Esq.	5	1 2	150	..	36·26	149	121
D Dawlish (Luscombe Castle)	Peter Hoare, Esq.	8	1 2	175	35·9	35·33	174	124
D Bovey Tracey (Hedgebarton)	S. C. Chapman, Esq., C.E.	5	1 6	1137	59·2	45·35	175	143
D Bovey Tracey (Edymead)	Rev. W. V. Vickers	5	1 9	200	..	33·54	145	114
W Ashcombe (Thorns Reservoir)	S. F. C. Churchward, Esq.	5	1 0	550	36·4	34·96	..	..
D Hennock (Hazlewood)	R. P. Kitson, Esq.	5	1 0	650	..	33·00	138	122
D Moretonhampstead (Bullaton)	S. C. Chapman, Esq., C.E.	8	1 0	928	42·2	38·52	185	136
D Moretonhampstead (Mardon)	S. C. Chapman, Esq., C.E.	8	1 0	837	40·6	36·85	185	142
D North Bovey (Manor House)	Mr. J. T. Laurence	5	1 0	700	49·0	36·64	181	142
M Chagford (Hurston Ridge)	S. C. Chapman, Esq., C.E.	5	1 0	1350	..	51·37	..	..
M Chagford (Toms Hill)	S. C. Chapman, Esq., C.E.	5	1 6	1500	..	59·65	..	..
M Chagford (Whiteridge)	S. C. Chapman, Esq., C.E.	5	1 6	1650	..	61·44	..	..
M Chagford (Hemstone)	S. C. Chapman, Esq., C.E.	5	1 6	1350	..	59·23	..	..
D Christow (Kennick) No. 1	S. C. Chapman, Esq., C.E.	8	1 0	836	41·6	34·32	181	128
D Christow (Kennick) No. 2	S. C. Chapman, Esq., C.E.	8	1 0	860	..	33·88	182	129
D Chagford (Fernworthy)	S. C. Chapman, Esq., C.E.	5	1 0	1150	..	52·62	197	148
D Chagford (Metherall)	S. C. Chapman, Esq., C.E.	8	1 0	1150	..	50·08	196	147
M Chagford (Thornworthy Down)	S. C. Chapman, Esq., C.E.	5	1 6	1250	..	55·59	..	..
M Chagford (Crownhall)	S. C. Chapman, Esq., C.E.	5	1 0	1320	..	56·03	..	..
D Moretonhampstead (Stinhall)	S. C. Chapman, Esq., C.E.	5	1 6	844	48·9	39·72	160	139
M Moretonhampstead (Blckngstne)	S. C. Chapman, Esq., C.E.	8	1 0	1158	42·5	32·89	..	..
D Christow (Laployd)	S. C. Chapman, Esq., C.E.	5	1 6	1041	41·6	37·00	181	130
D Chagford (Thornworthy)	Miss W. H. Varwell	5	0 6	1175	59·6	52·83	178	147
D Chagford (Dartmoor Sanatorium)	The Secretary	5	1 6	750	50·3	44·99	175	142
D Chagford (Huish)	Col. P. Hart Dyke, D.S.O.	5	1 0	595	..	41·27	179	135
6.—EXE. 445 sq. mi.								
Exmouth (Colerstraive)	J. Barber, Esq.*	5	0 0	100	..	30·15	..	..
D EXMOUTH (Waterworks Road)	S. Hutton, Esq., C.E.	5	1 0	195	28·6	28·71	142	107
D Exmouth (Filters, Salterton Rd.)	S. Hutton, Esq., C.E.	8	8 6	195	31·5	31·06	167	114
D Exmouth (Filters, Capel Lane)	S. Hutton, Esq., C.E.	5	8 0	240	30·3	30·39	171	110
D Lympstone (Manor House)	Miss L. Shelden	5	0 11	54	30·8	29·35	162	110

* Per *Devon and Exeter Gazette.*

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SOUTH DEVONSHIRE—(*con.*)		*in.*	*ft. in.*		*in.*	*in.*		
6.—EXE—(*con.*)								
D Woodbury (Oakhayes)	E. S. Chattock, Esq.	5	1 0	200	..	28·79	149	116
d Topsham (Altamira)	Mrs. Wimbush	5	0 9	120	29·3	25·82	..	..
D Exminster (Trood House)	Lt.-Col. T. L. Ormiston	5	1 0	75	..	28·67	160	117
D Exeter (Hatfield, Longdown)	C. Holman, Esq.	5	0 10	450	33·8	28·64	146	116
d Aylesbeare (Rosamondford)	A. T. Loram, Esq.	5	0 9	220	31·4	28·43	..	107
D Exeter (Devon and Exeter Inst.)	Miss D. Drake	5	13 7	155	30·5	26·95	161	114
Exeter (The Close)	Rev. Canon D. McLaren	5	0 9	100	..	27·33	150	118
D Exeter (Magdalen Rd.)	Major H. W. N. Shewell	5	1 7	110	..	27·86	144	114
D Tedburn St. Mary Rectory	Rev. H. Rusbridger	5	0 10	400	32·7	27·61	185	128
d Rockbeare Manor	Lt.-Col. H. Spencer Follett	5	0 10	180	30·9	26·13	..	110
D Cheriton Bishop (Medland Manor)	Lady Lennard	5	0 7	550	..	27·71	175	127
D Poltimore Rectory	Rev. Dr. Hopkinson	5	1 0	80	..	31·06	156	121
D Brampford Speke	E. E. Stevens, Esq.	5	1 0	170	..	27·31	147	118
D Crediton (Ship Hotel)	R. Stanley Clarke, Esq.	8	1 2	200	33·1	27·51	158	126
d Crediton (U.D.C.)	The Surveyor	5	1 3	198	..	25·87	..	114
D Silverton (Killerton)	Rt. Hon. Sir F. Dyke Acland, Bt., P.C.	5	1 0	159	..	26·86	157	120
D Silverton	G. B. Savery, Esq.	5	1 0	260	..	28·92	174	120
D Crediton (Okefield)	Seymour F. Pope, Esq.	5	1 0	325	32·2	26·59	174	126
D Copplestone (Copplestone House)	Miss M. Pope	5	0 11	315	34·1	26·98	179	124
D Bradninch (Dunmore House)	Miss H. R. Hepburn	5	1 0	300	33·7	28·31	151	116
D Cullompton	Murray T. Foster, Esq.	5	1 0	202	35·3	27·87	170	123
D Cullompton Court	Dr. E. S. Cardell	5	1 0	200	..	28·01	161	115
D Kentisbeare	A. E. Painter, Esq.	5	1 0	304	..	28·27	153	117
D Tiverton (St. Aubyn's Park)	F. C. Fox Strangways, Esq.	5	1 0	394	39·4	30·29	177	123
D Tiverton (Halberton)	Miss M. G. Izat	5	1 0	240	40·1	33·21	181	127
D Tiverton (Blundell's School)	E. G. Peirce, Esq.	5	1 6	270	..	29·50	167	119
d Hemyock Place	N. J. Hitchings, Esq.	5	3 0	850	..	27·91	..	117
D Tiverton (Washfield Rectory)	Rev. A. Ellison	5	1 0	500	..	32·09	159	126
D Bampton (Stuckeridge)	Brig-Gen. J. C. Livingstone-Learmonth, C.M.G.	5	1 3	750	..	28·94	151	123
D Bampton (Oakford)	Miss M. E. Tedder	5	1 0	650	..	31·27	163	132
D Bampton (Castle Grove)	Major B. M. Read	5	1 4	272	..	32·73	168	137
D Morebath Manor	C. H. W. Malet, Esq.	5	1 0	600	..	30·60	174	133
7.—AXE & C. 237 sq. mi.								
d Budleigh Salterton (West Ways)	J. Hartree, Esq.	5	1 0	140	..	27·90	..	112
D Budleigh Salterton (Braywick)	E. Fisher, Esq.	5	1 0	110	..	28·47	140	115
D Budleigh Salterton (Tidwell Ho.)	Mrs. J. H. Foster	5	1 0	100	..	26·82	145	112
D Budleigh Salterton (Knowle Ho.)	Mrs. Pepys	5	1 4	230	..	29·47	136	123
Budleigh Salterton (Squabmoor)	S. Hutton, Esq., C.E.	5	1 0	267	31·9	30·40	..	..
East Budleigh (Bicton Common)	S. Hutton, Esq., C.E.	5	1 0	300	32·2	29·10	..	..
D East Budleigh (Bicton Gardens)	Mr. H. G. Davey	5	1 0	90	31·4	29·27	155	118
D Salcombe Regis (Steephill)	Burleigh D. Kilburn, Esq.	5	1 0	150	..	28·57	148	112
D Sidmouth (U.D.C.)	The Borough Surveyor	5	1 0	25	..	27·77	146	105
D Sidmouth (Loretto)	S. Horsley, Esq.	5	1 0	100	..	29·60	149	111
d Sidmouth (Winslade Cottage)	Miss G. Collins, M.B.E.	5	1 0	145	34·1	30·50	..	..
D Sidmouth (Sidmount)	Miss C. M. Radford	5	1 0	149	32·4	29·44	143	115
D Seaton (Townsend)	The Clerk to the U.D.C.	5	1 0	43	..	29·09	148	115
D Seaton (Bunt's Hill)	Dr. R. H. Norman	5	0 10	200	..	29·70	148	112
D Seaton (Withylake)	T. F. Tracy, Esq.	5	1 0	200	..	30·31	153	119
D Lyme Regis (Pinhay)	Mr. W. F. Shillabeer	5	1 11	465	34·9	29·79	148	114
D Ottery St.Mary (Broad Oak)	Miss Tallant	5	1 2	350	..	31·30	180	111
D Ottery St. Mary (Little Close)	P. M. Miller, Esq.	5	0 9	250	..	31·07	157	108
D Ottery St. Mary (West Hill)	B. Stansbury, Esq.	5	1 6	340	34·2	31·44	177	111
D Ottery St. Mary (Broad Street)	H. D. Badcock, Esq.	5	1 0	170	36·3	31·83	162	117
D Axminster (Lea Combe House)	Major A. C. F. Luttrell	5	1 6	170	38·4	33·42	132	115
D Honiton (Feniton Court)	Col. A. D. Acland, C.B.E.	8	1 0	235	..	32·11	173	130
D Honiton (Beech Grove)	Major A. T. Baker	5	0 10	340	38·5	33·21	161	117

DIVISION V—SOUTH-WESTERN COUNTIES—(*con.*).

STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Aver-age Rain-fall.	1933. Rain-fall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
SOUTH DEVONSHIRE—(*con.*)		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
7.—AXE—(*con.*)								
D Axminster (Coaxdon Hall)	Dr. Cecil Woodhouse	5	1 0	165	37·5	29·19	140	111
D Membury (Yarty House)	Major W. H. Wilkin	5	1 0	245	..	28·37	149	101
D Honiton (Allington)	Mrs. J. W. Saunders	8	1 6	150	..	29·63	150	109
D Membury (Green Down)	The late James Lee, Esq	5	1 0	500	38·4	32·83	150	102
D Stockland (Post Office)	James Clarke, Esq.	5	1 6	350	40·5	32·42	150	110
NORTH DEVONSHIRE. (Area, 898 sq. mi.)								
1.—NORTH COAST STREAMS. 77 sq. mi.								
D Croyde (Baggy Point)	Miss C. M. Hyde	5	1 0	35	..	24·02	146	117
D Woolacombe (Hotel Grounds)	Miss Chichester	5	1 0	60	..	22·54	125	110
D Ilfracombe (Reservoir)	A. J. Westaway, Esq.	5	1 0	395	46·2	37·79	172	137
D Ilfracombe (Langleigh)	H. B. Holland, Esq.	5	1 0	127	41·8	33·03	154	122
D Ilfracombe (Bowling Green)	A. J. Westaway, Esq.	5	1 0	25	..	31·55	151	119
2.—TAW. 442 sq. mi.								
Spreyton (Lynderies)	Lt.-Col. J. Simpson	5	1 0	660	36·9	30·09	..	..
D Witheridge	Rev. J. A. S. Castlehow	5	1 0	600	39·5	26·62	132	101
Chittlehamholt	Rev. H. Carter	5	1 0	430	..	27·40	139	..
d East Anstey Rectory	Rev. J. S. Payne	5	0 9	750	..	32·11	(158)	(136)
D East Anstey (Rhyll Manor)	Mrs. E. L. Hancock	5	1 0	850	..	33·81	147	131
D Filleigh (Castle Hill Gardens)	The Countess Fortescue	5	1 0	317	43·1	30·95	160	129
Tawstock Court	Sir Basil Peto, Bart.	8	1 0	150	39·7	30·07	..	..
D Molland (Green Cot)	The late S. J. Case, Esq.	5	1 0	674	50·5	32·64	171	130
D Barnstaple (N. Dev. Athenæum)	The Librarian	8	1 0	25	36·6	27·04	192	126
D Barnstaple (Fort Hill)	Miss E. F. Sterry	5	1 0	197	38·3	28·87	187	136
D High Bray Rectory	Rev. C. F. Ford	5	1 1	700	..	35·92	171	127
D Barnstaple (Westaway)	Major O. L. Trechmann	5	1 0	140	39·1	27·55	163	119
Goodleigh (Willesleigh House)	Lt.-Col. Montague H. Hall	5	1 0	375	40·0	27·59	151	125
D Goodleigh (Gunn Cottage)	Major H. Sandford Claye	5	1 0	720	43·4	31·88	161	134
D Braunton	A. J. Besley, Esq.	5	1 0	145	33·5	26·28	152	115
D Arlington Court	Miss Chichester	5	1 0	613	53·8	37·77	173	146
D Challacombe	A. J. Westaway, Esq.	5	1 0	815	62·2	45·23	180	144
D Georgeham (Spreacombe Manor)	A. Leigh Barker, Esq.	5	0 9	340	38·1	29·64	174	128
D Kentisbury	Noel Irwin, Esq. †	5	1 0	557	..	35·27	180	132
3.—TORRIDGE. 342 sq. mi.								
Dartmoor (Cranmere Pool)	S. R. Harry, Esq., for M.O.	5	1 0	1845	..	58·60	..	..
Dartmoor (Newbridge)	S. R. Harry, Esq., for M.O.	5	1 0	1500	..	49·00	..	..
D Okehampton (Uplands)	E. P. Burd, Esq.	5	1 0	700	51·4	41·86	170	137
D Okehampton (Grammar Sch.)	Wm. Hunter, Esq.	5	1 0	500	..	40·62	143	132
D Monkokehampton	Rev. R. Y. Holmes	5	0 6	245	..	25·60	158	126
Dolton (Hilliers)	A. Smythies, Esq.	5	1 3	380	37·9	26·55	151	129
D Torrington (Enfield)	G. M. Doe, Esq.	5	1 0	337	39·3	27·54	166	135
D Parkham (Melbory Moor)	The late F. Harding, Esq.	5	1 0	630	50·2	36·23	166	132
D Parkham (Melbury Reservoir)	The late F. Harding, Esq.	5	1 0	517	52·8	39·42	166	138
D Buckland Brewer (The Cottage)	Miss B. G. Rogers	5	0 11	469	45·0	32·99	187	139
D Littleham (Orleigh Court)	W. H. Rogers, Esq.	5	1 0	260	48·0	32·13	161	140
D Landcross (South Close)	C. R. C. Hibbert, Esq.	5	1 0	100	35·6	30·98	162	137
D Bideford (Jennett's Res.)	Borough Surveyor	5	1 0	62	..	28·99	157	131
D Bideford (Gammaton Res.)	Borough Surveyor	5	1 0	350	..	28·62	158	129
D Bideford (Webbery)	Mrs. C. E. Boyd	5	1 0	355	37·7	28·36	158	125
D Westleigh House	Rev. H. G. de C. Stevens Guille	5	1 0	187	35·6	27·18	169	121
d Westward Ho ! (Royal Golf Club)	Major A. Newton-King	5	1 6	10	32·3	25·01	..	120
4.—WEST COAST STREAMS. 32 sq. mi.								
D Hartland (Fosfelle)	R. P. Chope, Esq., B.A., J.P.	5	1 0	480	46·0	32·91	176	131
5.—EXE. 5 sq. mi.								

† For Royal Meteorological Society.

DIVISION V—SOUTH-WESTERN COUNTIES—(*con.*).

	STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Aver-age Rain-fall.	1933. Rain-fall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
	CORNWALL. (Area, 1,363 sq. mi.)		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
	1.—CAMEL & N.W. COAST STREAMS. 458 sq. mi.								
	Crowan (Boswyn Res.)	Camborne Water Co.*	..	..	511	47·6	40·62	188	152
D	Lelant	Mrs. Tyringham	5	1 3	50	44·4	37·14	176	140
D	Hayle (Gwythian Road)	Caldwell Harpur, Esq.	5	0 10	98	40·1	34·17	182	149
D	St. Ives (Halsetown Vicarage)	Rev. T. C. F. Barfett	5	1 0	328	..	37·33	187	148
D	St. Ives (Bussow Moor)	The Borough Surveyor	5	1 1	397	48·6	35·58	183	140
D	ST. IVES (Cemetery)	The Borough Surveyor	5	1 1	124	..	37·19	170	127
d	Camborne	Miss I. Osborne	5	1 9	402	44·1	39·65	..	129
	St. Ives (Liscoruah)	Col. J. M. Findlay, D.S.O.*	5	0 9	300	47·3	34·42	185	141
D	REDRUTH (Trewirgie)	A. P. Jenkin, Esq., J.P.	5	1 0	397	45·3	41·68	189	146
M	Redruth (Green Lane Nurseries)	F. Sanders, Esq.	5	1 0	270	*41·2*	41·11	..	..
D	St. Agnes (Church Town) *new g.*	Dr. W. C. Whitworth	5	1 0	318	36·5	35·28	176	140
	Newquay (Reservoir)	C. C. Vigurs, Esq., B.A., M.D.	5	1 0	210	33·4	29·20	..	..
D	NEWQUAY (Mount Wise) No. 1	The U.D.C. (C. C. Vigurs, B.A., M.D.)	5	1 0	190	33·2	28·22	171	126
D	Bodmin (Polgwin)	H. D. Foster, Esq.	5	1 0	400	47·7	39·99	180	148
D	Bodmin (Castle Hill House)	Mrs. Leslie	5	1 0	484	49·4	40·52	210	162
D	St. Mawgan (Trenance)	Trenance Ltd.	5	1 6	250	..	30·78	164	140
D	Helland (Tredethy)	Capt. G. Wilson, R.N.	5	0 10	440	42·7	36·15	178	149
D	Little Petherick (St. Petroc Minor)	Miss A. T. Skilbeck	5	1 2	150	32·0	29·50	199	137
	Wadebridge (Bryn)	Mrs. K. D. Beare	5	1 6	50	38·7	(30·74)	..	..
D	Wadebridge (Trewornan)	Brig.-Gen. L. J. Hext, C.M.G.	5	1 0	30	36·0	30·58	184	141
D	St. Kew (Skisdon)	Mrs. Braddon	5	1 0	100	40·3	33·94	192	148
	St. Minver (Trebetherick)	A. T. Roseveare, Esq.	8	1 0	70	32·0	28·39	171	123
w	St. Minver (Lundy Bay)	W. Poynter Adams, Esq.	5	1 0	240	..	30·63	..	..
	Camelford (Roughtor)	A. W. Patten, Esq.*	..	..	940	..	46·49	175	159
D	Camelford (Stannon Clay Wks.)	English China Clays, Ltd.	8	2 0	800	54·8	44·41	203	163
D	BUDE (School House)	Clerk to the U.D.C.	5	1 0	50	33·4	26·04	162	126
	Bude (Trelana)	G. A. C. Thynne, Esq.	5	2 0	200	32·7	27·42	..	132
D	Kilkhampton	J. E. Heasman, Esq.	5	5 0	500	..	35·13	171	144
	2.—FOWEY & S.E. COAST STREAMS. 620 sq. mi.								
D	THE LIZARD (C. Guard Stn.)	Station Officer (M.O.)	8	1 0	240	..	28·40	172	132
M	Lizard (Tregullas House)	A. P. Jenkin, Esq.*	5	1 0	244	35·2	28·02	..	..
D	Ruan Minor	Miss H. F. Shepherd	5	1 0	210	36·0	28·53	179	131
	Mullion (Council School)	E. J. Perry, Esq.	5	1 1	208	37·4	30·61	176	133
D	Mullion	H. H. Penrose, Esq.	5	0 10	178	35·3	29·79	177	125
D	Porthcurno	Eastern Telegraph Co.	5	1 0	150	36·2	32·84	178	129
	St. Keverne (Lanarth)	P. D. Williams, Esq.	5	1 3	310	43·7	34·01	186	145
D	Bosahan (St. Martin-in-Meneage)	Hon. Mrs. Colborne Vivian	5	1 3	180	..	37·26	164	147
	Helston (Tenderah)	J. W. Tyacke, Esq	5	1 7	210	42·0	34·94	174	143
D	Constantine (Pons-a-Verran)	A. Mayne, Esq.	8	1 0	60	41·2	33·98	186	144
D.	Penzance (Trewidden)	Mrs. C. Williams	5	1 0	275	39·6	34·30	172	139
d	St. Michael's Mount	Lord St. Levan	..	..	50	43·2	32·00	..	..
D	PENZANCE (Morrab Gardnes)	The Town Clerk	5	1 0	55	40·9	36·06	184	142
D	Penzance (Trengwainton House)	Lt.-Col. E. H. W. Bolitho	8	1 2	400	46·4	39·20	184	152
D	GULVAL (Experimental Stn.)	Cornwall County Council	5	1 0	20	41·5	35·79	171	140
D	Wendron (Ninemaidens)	W. E. Benney, Esq.*	5	0 10	700	..	44·95	185	155
D	FALMOUTH (OBSERVATORY) +(A)	The Supt. for Roy. Cornwall Poly. Soc.	5	1 0	167	43·6	33·45	173	140
D	Falmouth (Trefusis)	Lt.-Col. The Hon. H. W. F. Trefusis	5	1 3	200	39·5	28·27	173	128
D	Penryn (Ashfield)	J. G. Stephens, Esq.	5	1 0	95	42·2	34·84	194	137
	Penryn (Roskrow)	Mrs. E. Stephen*	..	..	550	49·8	39·03	158	137
M	Devoran	Lord Clifden*	5	1 0	120	41·8	(35·98)	..	..
D	Devoran (Devoran House)	Rev. A. S. Rashleigh*	5	1 0	50	..	37·34	187	144
D	Gwennap (Trevince)	C. H. Beauchamp, Esq.	10	1 0	240	45·5	43·96	191	152
D	St. Day (Council School)	R. R. Blewett, Esq.	5	1 0	390	49·2	40·70	202	149
D	Truro (Killiow)	Miss E. F. A. Daubuz	5	1 0	250	41·5	34·43	177	144
	Tregoney (Trewarthenick)	P. A. Welman, Esq.*	6	0 10	200	..	35·52	..	..
D	Truro (Tregolls)	Miss C. L. Rashleigh	5	1 0	65	41·6	36·96	192	147
D	Truro W.W. (Lower Tregurrow)	W. J. Lean, Esq.	5	1 0	71	42·2	36·04	164	149
D	Mevagissey	C. Metcalfe, Esq.	5	1 0	100	42·3	35·13	175	141
D	Tresillian	Chas. Nicholson, Esq.	5	0 10	50	..	35·17	161	136
D	Polperro	Mrs. F. H. Perrycoste	5	1 0	100	*39·2*	29·97	214	125

* *Per* Cornwall Rainfall Association.

DIVISION V—SOUTH-WESTERN COUNTIES—(*con.*).

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CORNWALL—(*con.*)		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
2.—FOWEY & S.E.—(*con.*)								
D§Fowey	Town Clerk	5	1 0	51	..	32·17	168	145
D St. Austell (Charlestown Old Vic.)	C. A. Battiscombe, Esq.	5	4 0	204	*42·7*	40·71	171	146
D St. Austell (Trevarna)	W. M. Coode, Esq.	5	1 0	300	45·8	42·20	180	153
D East Looe	W. D. Clague, Esq.	5	1 0	50	..	34·06	163	125
D Downderry (The Watch House)	Mrs. Sneyd	5	1 0	100	..	31·54	172	147
D Looe (Morval)	Capt. A. H. Tremayne, R.N.	5	1 0	150	46·1	38·45	159	138
D Lostwithiel (The Terrace)	R. Pease, Esq.	5	1 0	110	49·2	41·36	175	137
D St. Keyne (Locrenton)	Rear-Admi. R. Wykes-Sneyd	5	0 10	250	..	42·15	183	147
D Menheniot (Coldrenick)	Rev. F. E. Trelawny	5	1 0	301	47·1	41·78	150	131
D Liskeard (Penmilder)	Miss D. P. Foster	6	1 0	301	..	39·90	171	140
Liskeard (Lewarne)	W. R. Rendell, Esq.	8	0 10	420	..	48·35	190	153
D Liskeard (Treventon)	E. R. Foster, Esq.	5	1 0	360	..	40·86	187	152
St. Cleer (Tregarric)	Col. J. D. A. Roberts	5	1 6	800	49·4	38·15	..	..
D Bolventor Vicarage	Rev. S. J. Pethick	5	1 0	845	67·6	51·13	192	159
3.—TAMAR & C. 279 sq. mi.								
D Devonport (Empacombe)	Miss M. C. Algate	5	2 6	20	36·8	31·09	170	141
D Devonport (Cremyll)	S. B. Wilcox, Esq.	5	1 4	25	36·3	28·23	165	128
D Torpoint (Trethill House)	Col. J. D. A. Roberts	5	1 6	200	34·5	29·31	159	120
Torpoint (Wilcove)	G. P. Jenkin, Esq.*	..	..	40	39·1	33·59	..	..
D§St. Mellion (Ellbridge Exp. Stn.)	The Horticultural Supndt.	5	1 0	200	..	38·48	169	139
D St. Mellion (Pentillie Castle)	W. T. Johnson, Esq.	5	1 0	150	..	37·95	169	128
d Callington	D. H. Watkins, Esq.	5	0 9	525	..	(37·14)	..	..
Gunnislake (Drakewalls)	J. D. Woolcock, Esq.*	5	1 0	573	..	40·08	168	139
d Stoke Climsland School	T. Oates, Esq.	5	1 0	458	..	35·49	..	..
D Launceston (North Hill)	Miss M. E. Hale	8	1 0	475	..	45·43	190	157
D Launceston (Landue)	Miss S. E. Tregoning	5	0 11	225	42·5	35·70	188	141
D Launceston (Hexworthy)	R. B. Rogers, Esq.	5	1 0	270	42·1	34·28	180	124
Egloskerry (Tregeare)	Mrs. Lethbridge*	5	1 6	575	43·1	(34·97)	..	..
D North Tamerton (Davies)	W. S. Bray, Esq.	5	1 0	390	..	30·03	172	137
4.—INSULAR.—Isles of Scilly. 6 sq. mi.								
D St. Mary's (C. Guard Stn.)	Station Officer (M.O.)	8	1 0	163	31·9	30·75	194	142
D Tresco Abbey	Maj. A. A. Dorrien Smith, D.S.O.	5	1 0	40	33·4	30·31	194	143
SOMERSETSHIRE. (Area, 1630 sq. mi.)								
1.—LOWER AVON. 300 sq. mi.								
D Wanstrow (The Manor Cottage)	P. E. B. Warburton, Esq.	5	1 0	465	37·7	30·03	128	98
D Shepton Mallet (Pondsmead)	R. A. Hobhouse, Esq.	8	1 0	710	44·9	34·89	154	123
D Frome W. W. (Egford)	L. Slaughter, Esq.	8	2 0	270	35·8	27·01	149	105
D Frome (Selwood School)	Miss E. M. Coombs	5	1 7	320	33·9	25·78	144	100
D Mells (Selwood)	Miss E. G. Horner	5	1 0	344	37·2	28·37	157	106
D Binegar (Gurneyslade)	Rev. H. M. Caffrey	5	1 0	588	43·3	33·19	144	112
D Stratton-on-Fosse (Downside Ab.)	Rev. H. M. Caffrey	8	1 0	600	41·5	32·08	164	111
D Orchardleigh Park	Major A. C. Duckworth	8	1 0	320	32·8	27·54	139	100
D Lullington	H. G. Chislett, Esq.	5	1 0	200	..	24·12	128	93
D Chilcompton (The Woodlands)	C. H. M. Thring, Esq.	5	0 10	450	..	30·10	165	110
D Chewton Mendip (The Priory)	The Lord Chewton	5	1 0	550	45·0	30·53	147	109
D Midsomer Norton (C.E. School)	J. Poyner, Esq.	5	0 8	310	..	29·08	149	109
D Radstock (Frome Hill)	C. H. Perry, Esq.	8	2 6	330	34·7	27·75	149	106
D Litton (Sherborne Res.)	J. A. McPherson, Esq., C.E.	5	1 0	340	40·0	30·04	137	112
w Harptree Hill	J. A. McPherson, Esq., C.E.	5	1 0	784	..	31·67	..	..
d Tellisford (Crabb Hall)	Dr. W. C. Everley Taylor	5	1 0	182	..	23·28	..	..
D Hinton Blewitt Manor	Maurice Church, Esq.	5	1 3	500	39·6	28·07	177	112
d High Littleton Vicarage	Rev. T. H. Fitzpatrick	5	0 11	446	..	25·37	(147)	(108)
D Clutton (Council School)	I. C. Hoyal, Esq.	5	1 0	427	35·5	27·78	193	115
D Pensford (Sutton Court)	Lord Strachie	8	1 0	280	37·7	26·16	157	106
D Midford (Pumping Station)	Combe Down W.W. Co., Ltd.	5	1 0	135	..	24·89	131	102
d Monkton Combe (Crossways)	M. J. Lipscomb, Esq.	5	1 0	210	33·2	25·55	..	98
D Pensford (Hunstrete House)	H. Leyborne Popham, Esq.	5	0 9	400	33·7	25·73	155	110
D Chew Magna	J. A. McPherson, Esq., C.E.	5	1 0	180	36·3	26·45	133	107
D Pensford (Publow School Ho.)	A. Hayes, Esq.	5	1 0	230	33·2	25·91	142	109

§ Unorthodox exposure. § Turf Wall erected Oct. 1932. * *Per* Cornwall Rainfall Association.

DIVISION V—SOUTH-WESTERN COUNTIES—(*con.*).

STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Rain-gauge: Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
		in.	*ft. in.*	*ft.*	*in.*	*in.*		
SOMERSETSHIRE—(*con.*)								
1.—LOWER AVON—(*con.*)								
D BATH (Henrietta Park)	Medical Officer of Health	5	1 0	67	30·3	24·56	145	99
D Bath (Monkton Combe)	W. G. Lock, Esq.	5	1 0	450	30·3	26·10	180	117
D Bath (Combe Lodge)	Major T. H. Clark	5	1 0	520	31·4	25·08	134	102
D Bath (Statutory Hospital)	Bath Corporation	5	1 0	520	32·8	23·43	125	103
D Bath (Claverton Lodge)	G. Lipscomb, Esq.	5	1 3	375	29·1	24·10	141	99
D Bath (Lansdown Place)	Lady Stothert	5	1 2	450	31·5	24·36	158	102
D Bath (Charlcombe)	Bath Corporation W.W.	5	1 6	325	31·4	23·80	126	99
D Whitchurch (The Mead)	N. L. Butt, Esq.	5	0 6	300	..	25·96	160	105
D Batheaston Reservoir	Bath Corporation W.W.	5	1 0	248	31·1	26·58	153	110
D Keynsham (Chewton Road)	A. E. Stephens, Esq.	8	1 0	133	29·6	24·50	138	104
D Barrow Gurney Reservoir	J. A. McPherson, Esq., C.E.	5	1 0	300	36·2	28·11	133	102
D Lansdown	Bath Corporation W.W.	5	1 0	380	..	24·26	140	103
D LONG ASHTON (Research Station)	The Principal	8	0 8	162	34·1	26·35	158	107
D Walton-in-Gordano	Lt.-Col. Sir Chas. Miles, Bt.	5	0 9	80	..	24·42	144	109
D Failand House	University of Bristol	5	1 0	390	34·6	27·53	166	109
D Portishead (Bristol Rd.)	Portishead Dist. Water Co.	5	1 6	24	34·9	23·47	149	101
D Portishead (St. Mary's Road)	Paul Sinnock, Esq.	5	1 0	67	33·0	22·91	133	95
2.—YEO, AXE & BRUE. 405 sq. mi.								
D Alford Rectory	Rev. A. B. Burney*	5	..	100	30·8	26·96	137	108
D Somerton (Butleigh Court)	R. Neville Grenville, Esq.	8	1 2	95	30·5	23·20	131	97
d Bruton (Great Down Cottage)	F. K. Makins, Esq.	5	1 0	280	..	27·73	(154)	(106)
d Ditcheat Rectory	Rev. H. H. Tripp, M.A.	5	1 0	230	31·5	26·05	(149)	(107)
D Street (Overleigh House)	J. B. Clark, Esq.	5	0 10	100	28·5	21·44	132	86
D Street (Hindhayes)	Mrs. W. Bancroft Clark	5	1 6	78	28·8	22·56	135	94
D Street (Portway)	J. E. Clark, Esq.	5	1 0	80	..	22·60	144	97
Street (Wraxhill Corner)	A. H. Clothier, Esq.	5	1 10	70	..	22·96	..	..
D Street (Millfield) *old g*	The late Miss Alice Clark	8	0 6	100	29·5	22·42	123	96
D Street (Millfield) *new g.*	The late Miss Alice Clark	5	1 1	100	28·5	21·12	123	94
D Glastonbury (St. Michael's)	Ven. Archdeacon W. Farrer.	5	1 0	220	28·8	23·85	139	102
d Catcott (The Crift)	Rev. H. Buckton	5	1 0	100	..	(21·55)	(134)	(99)
D Edington	Major A. C. F. Luttrell	5	1 6	90	31·2	23·62	139	113
D Chilton Polden (West House)	Mr. E. Chick	5	1 0	100	28·5	21·32	146	99
D Cossington Manor	J. C. Macro Wilson, Esq.	5	1 0	110	..	21·29	133	95
d Meare	E. J. H. Stott, Esq.	5	1 0	35	..	21·26	(126)	(100)
D Shepton Mallet (Pilton)	Miss E. M. Allen	5	1 3	354	34·6	24·51	151	105
D Shepton Mallet (Charlton)	C. E. Burnell, Esq., J.P.	5	1 0	481	38·8	29·63	159	118
D Shepton Mallet (Field House)	Sir F. H. Berryman	5	1 0	500	38·6	28·02	158	109
D Shepton Mallet (Sewage Farm)	The Surveyor, U.D.C.	5	1 0	330	38·7	27·91	159	114
D Doulting Vicarage	Rev. H. S. Darbyshire	5	1 0	693	39·8	30·98	152	118
D Wells (The Palace)	Mrs. Wynne Willson	..	..	150	..	23·28	..	..
d Wells (St. Cuthbert's Lo.)	Miss H. S. Laidlay	5	1 0	135	..	(23·86)	..	..
d Wells (Mental Hospital)	The Medical Superintendent	5	1 2	300	36·2	24·70	..	..
d Blackford (Council School)	The Headmaster	5	1 0	50	..	21·40	..	..
d Wells (Wookey Hole Paper Mills)	W. S. Hodgkinson & Co.,Ltd.	5	1 0	200	35·1	28·71	..	..
D Wookey Hole (Wookey Ho.)	E. T. Wilson, Esq.	5	1 0	200	..	26·68	149	110
D Burnham (Chalbury)	H. A. Smith Spark, Esq.	5	1 0	20	29·1	24·08	147	98
D Burnham	W. H. Chowins, Esq., C.E.	8	0 8	24	28·5	22·99	134	100
D Burnham (Berrow Road)	Miss M. Robinson	5	1 0	10	29·2	21·00	135	91
D Burnham (Brent Knoll)	J. Griffith, Esq.	5	1 9	25	30·3	22·75	149	93
D Cheddar (Pumping Station)	J. A. McPherson, Esq., C.E.	5	1 0	50	33·6	25·39	138	96
w Charterhouse	J. A. McPherson, Esq., C.E.	5	1 0	619	43·2	31·12	..	..
w Compton Martin	J. A. McPherson, Esq., C.E.	5	1 0	276	42·4	29·35	..	..
d Shipham (Studleigh End)	Miss E. M. Garaway	5	1 0	540	..	25·78	..	..
w Ubley (Rookery Farm)	J. A. McPherson, Esq., C.E.	5	1 0	525	44·9	32·53	..	..
D Winscombe (The Down)	J. Grubb, Esq.	5	1 0	295	35·8	27·09	144	108
D Banwell (Eversleigh)	Dr. Kenneth Anderson	5	1 6	50	33·9	24·31	148	99

* *Per* Mid-Wessex Rainfall Association.

DIVISION V—SOUTH-WESTERN COUNTIES—(*con.*).

	STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
			in.	*ft. in.*	*ft.*	*in.*	*in.*		
	SOMERSETSHIRE—(*con.*)								
	2.—YEO, AXE and BRUE—(*con.*)								
w	Blagdon Hill	J. A. McPherson, Esq., C.E..	5	1 0	550	40·6	29·86	..	..
D	Blagdon (Pumping Station)	J. A. McPherson, Esq., C.E..	5	1 0	112	37·0	28·75	137	96
w	Blagdon (Coombe Lodge)	J. A. McPherson, Esq., C.E..	5	1 0	388	39·6	29·72	..	..
w	Nempnett (West Town)	J. A. McPherson, Esq., C.E..	5	1 0	263	36·3	26·45	..	..
w	Burrington (Burrington Links)	J. A. McPherson, Esq., C.E..	5	1 0	335	38·1	27·71	..	..
D	WESTON-SUPER-MARE (Clarence Pk.)	W. H. Allen, Esq.	5	1 0	29	29·9	25·60	123	93
D	Churchill (Langford House)	Sidney Hill, Esq., J.P.	8	0 10	90	..	32·66	160	108
w	Butcombe (Cholwell)	J. A. McPherson, Esq., C.E..	5	1 0	370	38·9	29·19	..	..
D	West Town (Downside)	Major E. J. Dunscombe	8	1 4	650	..	28·54	136	112
D	Yatton (Chelvey)	J. A. McPherson, Esq., C.E..	5	1 0	60	32·5	27·16	144	104
D	Backwell Hill	W. Garnett, Esq.	5	1 0	490	33·2	27·51	130	106
D	West Town	Theodore Robinson, Esq.	5	1 0	80	34·6	26·98	144	102
d	Clevedon (Gas Works)	J. Harger Pye, Esq.	5	1 2	22	33·5	24·94	(139)	(103)
D	Clevedon W.W. (Tickenham Rd.)	J. Harger Pye, Esq.	5	1 6	70	31·2	24·78	138	102
d	Clevedon (Bowling Green)	Mr. H. H. Brook	5	0 11	126	33·8	24·24	..	..
D	Clevedon (Mt. Heber Cottage)	G. M. S. Farmer, Esq.	5	1 0	144	34·3	24·47	134	93
D	Wraxall Court	Mr. G. Hyde	5	0 10	200	..	25·76	147	107
	3.—PARRETT. 568 sq. mi.								
D	Chard (High Street Council Sch.)	F. Barnard, Esq.	5	1 2	425	39·1	33·46	159	108
D	Crewkerne (The Reservoir)	E. H. Munford, Esq.	8	1 0	426	33·7	28·01	139	109
D	Crewkerne (Bincombe House)	Mrs. R. H. Symons	5	1 3	293	34·7	28·11	136	100
D	Chaffcombe House	Col. L. H. Noblett	5	0 10	400	33·1	30·56	155	106
D	Combe St. Nicholas	Rev. G. de Y. Aldridge	5	1 6	580	38·4	35·77	184	128
	Coker Court Gardens	Mr. T. H. Gilham	5	1 6	255	33·7	28·20	142	108
D	Ilminster	The Surveyor	8	0 9	182	..	30·01	129	100
D	Ilminster (Dillington Park) (R)	Mr. W. Goldthorpe	8	3 0	161	..	28·88	137	101
D	Yeovil (Reckleford School)	The Headmaster	5	2 0	150	..	29·51	132	98
D	Yeovil (Pen Mill Sewage Works)	Dr. C. W. Gee	5	1 0	102	30·6	27·30	166	103
D	Pitminster (Blagdon Hill)	G. L. Sidey, Esq.	5	0 10	750	..	33·31	174	122
D	Stoke-under-Ham	Miss M. H. Gillett	9	1 0	80	31·2	26·28	135	105
D	Angersleigh (Leigh Court)	A. Eastwood, Esq.	8	1 0	360	35·0	30·00	166	116
D	Ashbrittle (Kyrle)	Major J. H. Mathias	5	0 9	525	..	28·99	163	123
d	Bradford (Stoford Manor)	W. Simms, Esq.	5	0 8	110	..	27·24	..	..
D	Martock Vicarage	Rev. G. W. Saunders	5	0 9	61	29·6	23·38	134	98
D	Ash (The Grange)	L.C.R. Thring, Esq.	5	1 3	150	..	25·82	124	103
D	Rimpton	P. B. Cardwell, Esq.*	5	1 0	147	..	26·08	159	111
D	Taunton (The Park)	Dr. John Allen	5	1 0	71	29·5	24·61	149	101
D	Taunton (Holy Trinity School)	A. P. Guest, Esq., M.B.E.	5	1 0	65	29·1	24·34	159	104
D	North Curry Vicarage	Rev. A. Gossage Robinson	5	0 11	90	..	22·62	159	102
D	Milverton (Old Halls)	Mrs. Bere	5	1 8	250	..	25·11	153	120
D	Milverton (Spring Grove)	The late Major R. C. Coldwell	5	1 0	449	36·7	26·85	156	123
D	Wiveliscombe (Culverhead)	Lt.-Col. H. Jefferys Taylor, D.S.O.	5	0 10	430	39·6	27·41	134	111
D	Langport (The Grange)	Miss V. M. Page	5	1 0	50	27·9	22·71	172	102
D	Langport (Council School)	H. G. Jefferies, Esq.	5	1 0	52	28·1	23·18	135	103
D	Somerton (The Grange)	R. W. Pretor-Pinney, Esq.	5	1 0	106	27·8	24·21	127	99
d	Wiveliscombe (Council School)	The Headmaster	5	1 1	410	..	(26·39)	(150)	(119)
D	Bishop's Lydeard (Watts Ho.)	Sir Dennis Boles, Bart.	5	1 2	320	..	23·72	144	109
d	North Newton	The Headmistress	5	0 9	50	..	22·20	..	..
D	Aisholt (Timbercombe)	Mrs. White	5	1 2	700	33·2	28·03	165	120
D	Bagborough Rectory	C. Hubert Lance, Esq.	9	1 0	470	34·1	26·04	167	122
D	Spaxton (Bush House)	Capt. A. M. Stancomb, R.N.	5	1 0	250	..	25·04	152	114
D	Bridgwater (Blake Gardens)	R. A. Watson, Esq.	5	3 1	27	28·5	23·30	137	98
D	Bridgwater (Wembdon Road)	H. Corder, Esq.	5	1 0	30	29·9	22·61	148	96
D	Over Stowey (Quantock San.)	Medical Superintendent	5	1 0	500	..	28·61	125	105
D	Cannington (Ashford)	R. A. Watson, Esq.	5	1 1	102	31·4	22·34	130	99
D	CANNINGTON (Farm Inst.)	The Principal	5	1 0	95	..	22·07	166	99
D	Bridgwater (Fiddington)	J. M. Lee, Esq.*		..	..	..	26·75	159	107

* *Per* Mid-Wessex Rainfall Association.

DIVISION V—SOUTH-WESTERN COUNTIES—(*con.*).

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	SOMERSETSHIRE—(*con.*)		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
	4.—NORTH COAST STREAMS. 158 sq. mi.								
D	Elworthy (Willett)	H. C. Venning, Esq.	5	1 0	450	35·1	25·25	130	111
D	Croydon Hall	Capt. J. W. Bridges	5	3 0	500	41·6	31·09	159	127
	Bicknoller (Ford)	John Tracey, Esq.	5	1 2	150	33·0	26·04	158	111
D	Dodington	Miss W. J. Malet	5	1 0	450	..	26·58	143	120
D	Bicknoller (Weacombe Ho.)	O. T. Sadler, Esq.	5	1 0	320	34·2	23·88	132	117
D	Williton (Aller Farm)	R. G. Hosegood, Esq.	5	3 0	175	32·4	25·24	142	115
D	Williton (Eastfield)	Miss E. Heathcote	5	0 11	184	..	25·50	149	104
D	Williton (The White House)	S. L. Rogers, Esq., J.P.	5	1 0	97	30·6	23·83	139	106
D	Kilve Court	Miss A. Fry	5	1 0	150	30·0	26·07	149	113
D	Stogursey	Dr. P. Hallam	5	0 8	145	..	24·93	126	106
D	Stogursey (Fairfield House)	Lord St. Audries	5	1 0	150	31·1	25·19	150	108
D	Dunster	P. R. Day, Esq.	5	1 0	160	33·0	25·97	148	116
D	Stolford (Whitewick Farm)	C. Mackenzie, Esq.	5	1 0	10	..	22·58	110	93
D	Minehead (Blenheim Gardens)	A. Douglas Barron, Esq.	5	1 0	37	..	25·66	151	121
D	Porlock (Lynch Mead Allerford)	J. Dyke Acland, Esq.	5	1 3	113	34·6	24·89	178	117
D	Porlock (Bush Steep)	Mrs. W. P. Holmes	5	0 9	130	43·2	26·81	159	110
d	West Porlock (Underway)	N. G. Hadden, Esq.	5	1 0	80	44·2	32·54	..	106
D	Culbone (Lillycombe)	E. T. MacDermot, Esq.	5	1 0	1210	50·5	36·18	175	138
	5.—EXE. 122 sq. mi.								
D	Churchstanton (Widcombe)	G. Clinton Baker, Esq.	8	0 11	850	..	31·80	169	116
D	Exbridge	Exe Valley Fishery Co.	5	3 0	410	44·1	27·53	153	123
	Brushford Rectory	Rev. B. J. du Boe	5	1 0	450	44·3	29·59	156	126
D	Brushford Nurseries	Mr. G. Ruff	5	1 2	430	44·1	28·89	171	121
D	Dulverton C.E. School	C. J. R. Weaver, Esq.	5	0 9	550	..	30·07	163	125
D	Hawkridge (Liscombe)	Mr. E. W. Darby	5	1 6	980	57·8	33·38	173	144
D	Winsford	Capt. R. S. Le Bas	5	1 0	620	..	33·08	165	128
d	Exford (Stockleigh Lodge)	Lt. Col. W. W. Wiggin	5	1 6	980	54·8	39·81	..	..
	6.—AXE. 42 sq. mi.								
D	Wayford Manor	H. L. P. Baker, Esq.	5	0 10	400	..	32·46	156	117
D	Cricket St. Thomas	Mr. C. G. Rose	5	1 0	444	39·3	34·66	133	113
	7.—STOUR. 35 sq. mi.								
D	Temple Combe Rectory	Rev. Preb. R. W. Windsor.	5	1 0	250	34·9	29·92	143	113
d	Horsington Marsh	R. Parsons, Esq.*	5	..	250	..	25·51	(127)	(104)

DIVISION VI—WEST MIDLAND COUNTIES.

GLOUCESTERSHIRE. (Area, 1,243 sq. mi.)

	1.—WYE. 50 sq. mi.								
D	Chepstow (Castleford)	Mrs. W. R. Lysaght	5	0 11	146	35·8	29·59	140	110
D	St. Briavels (St. Briavels House)	Surg.-Cpt. O. W. Andrews, R.N.	5	1 0	750	43·4	31·49	161	111
d	Newland (The Cottage)	E. L. Ferrall, Esq.	5	0 7	450	..	30·25	..	..
d	Forest of Dean (Mailscot Lodge)	Forestry Commission	8	1 0	630	35·0	30·82	..	..
D	English Bicknor (Bicknor House)	T. F. Harvey, Esq.	5	1 0	490	32·6	27·00	144	109
D	Lydbrook (Viaduct House)	G. S. Damsell, Esq.	5	1 0	95	31·8	26·20	164	103
d	Ruardean Hill Lodge	Forestry Commission	8	1 0	932	..	27·78	..	..
	2.—SEVERN—Right Bank Tributaries. 176 sq. mi.								
D	Lydney (Clanna Cottage)	Brig.-Gen. A. M. Tyler, C.M.G.	8	0 10	359	39·7	28·83	155	105
d	Forest of Dean (Whitemead Pk.)	Forestry Commission	8	1 0	325	34·7	28·62	..	..
D	Forest of Dean (Blakeney Hill Lo.)	Forestry Commission	8	1 0	500	31·6	25·67	151	113
D	Forest of Dean (PARKEND)	Forestry Commission	8	1 0	325	..	29·51	159	110
D	Forest of Dean (Worcester Lo.)	Forestry Commission	8	0 11	712	37·4	29·03	158	110
D	Coleford (Cannop Colliery)	J. J. Joynes, Esq.	5	14 0	300	..	27·33	155	104
D	Westbury-on-Severn (Ninnage L.)	Miss N. E. Grant	5	1 0	120	29·2	22·82	139	99
d	Forest of Dean (Edgehills Lodge)	Forestry Commission	8	1 0	915	33·2	26·44	..	106
D	Newent (Taynton)	M. Philips Price, Esq.	5	1 0	50	29·0	23·19	142	97
D	Oxenhall (Dymock Woods)	Forestry Commission	8	1 0	232	..	21·70	132	104
D	Redmarley (Haselden)†	Miss F. L. Newbury	5	0 5	280	25·3	23·04	148	108
D	Bromsberrow Heath Pump. Stat.	W. Osborne Thorp, Esq., C.E.	5	1 0	181	26·2	24·42	124	100
D	Tewkesbury (Forthampton Ct.)	Mr. B. Webster	5	1 0	48	26·9	22·18	142	86
D	Tewkesbury (Upper Lode)	J. E. Bradley, Esq.	5	1 0	41	25·2	20·83	145	103

* *Per* Mid-Wessex Rainfall Association. † Station previously in Worcester. 1.

DIVISION VI—WEST MIDLAND COUNTIES—(*con.*).

STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Rain-gauge: Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
GLOUCESTERSHIRE—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
3.—SEVERN—Left Bank Tributaries. 372 sq. mi.								
D Chipping Sodbury (Horton Hall)	Colonel P. Burges	5	1 0	380	31·5	27·53	134	121
D Thornbury (Thornbury Park)	Capt. R. A. Bennett	5	1 3	70	32·2	24·74	141	108
D Tortworth Court	Head Gardener	8	1 0	264	31·5	24·32	137	104
D Tortworth School	E. A. Smith, Esq.	5	1 6	264	31·8	25·14	148	99
D Dursley (The Manor)	Miss H. M. Hutton	5	1 0	274	32·4	25·64	150	108
d Avening House	Lady Eleanor Byng	8	1 3	350	32·3	24·13	..	..
D Avening (Gatcombe)	Colonel H. G. Ricardo	6	1 0	550	31·6	25·73	147	122
d Berkeley Castle Gardens	Mr. T. B. Ashbee	5	1 6	60	29·1	24·28	..	90
D Nailsworth (Three Corners)	F. R. Rushton, Esq.	5	0 9	325	34·0	25·12	164	104
D Berkeley (Sharpness Docks)	A. J. Cullis, Esq., C.E.	5	1 3	50	29·5	28·11	132	95
D Minchinhampton (The Shard)	E. H. Denne, Esq.	5	0 8	500	32·0	24·63	159	107
D Minchinhampton (Rectory Cott.)	G. W. Fisher, Esq.	5	1 0	610	33·9	26·71	166	113
D Minchinhampton (Camp Field)	Miss B. M. Legh	5	1 6	640	33·9	27·83	168	114
D Chalford W.W.	Stroud Water Co.	5	1 6	241	..	24·16	145	100
D Frocester Manor	Capt. J. E. H. Graham-Clarke.	5	1 3	80	..	22·74	134	93
d Stroud (Rodborough Common)	Major H. Napier-Rowlatt	5	1 0	600	..	23·65	..	103
D Stroud (Thrupp)	George G. Loane, Esq.	5	1 0	300	..	24·48	164	102
d Stroud (Stanley Park Gdns.)	Sir P. S. Marling, Bt., V.C., C.B.	8	1 0	365	33·2	26·20	..	102
D Stonehouse (Wycliffe College)	W. A. Sibly, Esq.	5	1 0	120	29·0	21·40	155	101
Stroud (Berrimans)	E. Armitage, Esq.	5	1 0	750	34·0	29·35	..	..
D Whitminster (Parklands)†	W. Grey Robinson, Esq., J.P.	5	2 6	103	..	21·48	166	100
M Stroud (Lypiatt Park)	Mr. R. Paget	5	1 3	820	..	24·92?	..	..
D Miserden Park	The Agent	5	1 2	750	..	30·01	152	118
D Whitminster (The Junction)	A. J. Cullis, Esq., C.E.	5	1 0	32	..	23·15	163	93
D Haresfield Court	Miss Tidswell	5	0 10	100	30·2	25·92	130	91
D Harescombe Grange	Stamford Hutton, Esq.	5	1 0	557	29·3	23·98	155	106
D Cranham (Woodside)	J. H. Edwards, Esq.	5	1 5	650	..	25·10	145	104
D Quedgeley House	Miss M. F. Curtis-Hayward	5	1 3	65	27·9	23·44	154	103
D Witcombe Reservoir	C. J. Scudamore, Esq., C.E.	8	1 0	297	29·2	23·88	154	99
D Brockworth (The Kia)	Mrs. Grace Buckle	5	1 4	220	27·1	22·19	137	90
D Gloucester (The Park)	R. H. Ellis, Esq.	5	1 3	56	26·6	23·37	152	93
d Gloucester (Llanthony Lock)	J. E. Bradley, Esq.	5	1 2	39	25·4	20·80	..	86
D Gloucester (Maisemore Lock)	J. E. Bradley, Esq.	5	1 1	39	25·1	19·66	153	91
D Churchdown (Barrow Hill)	Mrs. J. H. Jones	5	1 0	225	27·9	22·56	142	98
D Dowdeswell Reservoir	G. Gould Marsland, Esq., C.E.	5	1 3	357	30·0	25·65	150	108
D Cheltenham Hewletts Res.)	G. Gould Marsland, Esq., C.E.	8	1 6	419	27·7	23·75	157	107
D Cheltenham (Sandford Mead)	G. Gould Marsland, Esq., C.E.	8	2 6	210	26·3	22·81	152	101
D CHELTENHAM (Montpellier Gds.)	The Town Clerk	5	1 0	214	26·5	23·26	155	97
d Cheltenham (Suffolk Square)	Rev. Preb. H. T. Williamson	5	1 0	227	..	(21·66)	(143)	(99)
D Cheltenham (Swindon)	J. C. M. Stanton, Esq.	8	1 2	136	25·6	21·13	156	101
D Tewkesbury Pumping Station	G. Gould Marsland, Esq., C.E.	5	1 0	47	23·9	19·75	142	92
4.—SEVERN—Upper Avon. 99 sq. mi.								
D Blockley	Miss E. M. Richardson	5	1 0	..	..	20·46	145	103
D Winchcombe (Sudeley Castle)	Major J. H. D. Brocklehurst	5	1 0	357	29·8	25·01	145	113
D Broadway (Buckland Manor)	Mr. J. Whiteley	5	1 0	300	27·7	19·90	160	94
5.—LOWER AVON & C. 198 sq. mi.								
D Bath (Monkswood Reservoir)	Bath Corporation W.W.	6	1 0	365	..	25·09	167	108
D Bristol (Tyndalls Pk. Rd.) (+A)	O. W. Dunscombe, Esq.	5	1 4	150	33·1	26·31	159	95
Bristol (Kingswood)	H. Pratten, Esq.	5	1 0	260	..	25·95	..	..
D Bristol (Hopewell Hill)	W. Gloucester Water Co.	5	1 0	381	30·5	23·30	128	93
d Bristol (Sneyd Park)	Mrs. A. M. Tanner	5	1 8	300	..	24·70	..	99
D Clifton (Oakfield Road)	J. A. McPherson, Esq., C.E.	5	1 0	200	33·0	24·61	137	89
D Clifton (All Saints Rd.)	H. T. Coles, Esq.	5	0 11	200	..	26·23	165	111
Bristol (St. Andrew's Park)	H. Vicars Webb, Esq.	5	1 6	200	32·6	25·29	150	97
D HORFIELD	G. H. Brown, Esq.	5	1 0	206	..	27·30	163	105
D Shirehampton (Kings Weston)	P. Napier Miles, Esq.	8	1 0	220	..	25·72	145	101
Winterbourne (Kendleshire)	J. Marsh, Esq.	5	1 0	170	..	25·42	..	..
D Frampton Cotterell (Park Ho.)	H. H. Harding, Esq.	5	1 0	158	29·8	25·47	165	105
D Badminton Gardens	The Head Gardener	5	1 0	407	..	28·90	146	112
D Almondsbury (Ridgewood)	R. E. Potter, Esq.	5	0 10	200	29·7	22·69	146	95
D Shipton Moyne P.S.	W. Gloucester Water Co.	8	1 0	314	..	24·78	146	106

† Previously called Stonehouse (Parklands).

DIVISION VI—WEST MIDLAND COUNTIES—(*con.*).

STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
GLOUCESTERSHIRE—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
6.—THAMES—Right Bank Tributaries. 15 sq. mi.								
7.—THAMES—Windrush & c. 333 sq. mi.								
D Somerford Keynes (Manor Ho.)	F. Fawcett, Esq.	5	0 9	450	27·9	23·56	152	113
D Fairford (Dunfield, Kempsford)	A. T. Iles, Esq.	5	1 0	260	25·6	21·56	143	99
D Fairford Vicarage	Rev. Canon R. C. S. Jones	5	1 0	280	26·7	22·14	147	109
D Lechlade (St. John's Lock)	Thames Conservancy	5	1 7	237	24·3	21·67	147	107
D Lechlade (Claydon House)	T. T. S. Metcalfe, Esq.	5	1 0	250	25·9	21·69	145	105
D CIRENCESTER (R. Agric. Coll.)	The Principal	5	1 0	443	..	24·99	154	108
D Cirencester (Gwynfa)	Nigel Woods, Esq.	5	1 0	354	30·8	25·28	153	108
D Daglingworth Manor	J. Herbert Scrutton, Esq.	8	0 10	450	30·8	27·26	154	112
D Cirencester (Barnsley Pk.)	W. H. Wykeham-Musgrave, Esq.	5	0 9	495	31·3	26·22	170	115
D Great Barrington	H. J. Barrett, Esq.	5	1 6	417	28·8	22·16	152	107
D Northleach (Leygore Manor)	Arthur E. Moss, Esq.	5	1 0	650	29·4	23·93	167	111
D Bourton-on-Water (Eastfield)	E. W. Kendall, Esq.	5	1 6	434	30·1	22·11	141	92
Bourton-on-Water (Chardwar)	Miss A. B. Moore	5	1 0	430	30·3	20·68	135	98
d Bourton-on-Water (Rectory)	Canon W. E. White	5	0 10	433	29·6	22·15	..	..
D Stow-on-the-Wold (Icomb Place)	Capt. G. H. Simpson Hayward	8	1 3	500	29·3	22·67	141	103
D Winchcombe (Temple Guiting Ho.)	Major C. Stacey	5	1 3	700	31·6	23·85	167	117
HEREFORDSHIRE. (Area, 840 sq. mi.).								
1.—WYE. 685 sq. mi.								
D Goodrich Court Gardens	Mrs. G. R. Trafford	5	1 8	200	29·7	27·56	158	126
Walford (Hill Court Gardens)	Mr. D. Hawker	5	1 1	161	28·4	23·65	(144)	(106)
D ROSS-ON-WYE(+A)	F. J. Parsons, Mus. Bac.(M.O.)	5	1 0	223	27·4	23·14	143	102
D Ross (Birchlea)	Miss M. L. Southall	5	1 0	210	28·2	24·96	157	111
D Bridstow (Ashe Leigh)	Major W. Stanley R. Cox	5	1 0	230	27·4	23·87	146	110
D Kentchurch Rectory	Rev. R. P. Dansey	5	1 0	220	34·6	28·95	160	111
D Ross (The Chantry)	M. F. Maclean, Esq.	5	0 10	475	..	25·13	160	111
d Perrystone Court	Lt.-Gen. G. S. Clive, D.S.O.	5	1 3	450	25·5	22·56	..	..
D Vowchurch (Ladywell House)	A. S. Wood, Esq.	5	1 0	400	34·9	27·61	168	114
D HEREFORD (Belmont Abbey)	The Abbot	8	1 0	292	37·6	22·75	158	100
d Hereford (Breinton Court)	Mrs. R. E. H. Baily	5	1 0	238	25·9	(19·52)	(149)	(98)
D Tarrington (Alder's End)	J. H. Whiting, Esq.	5	1 2	360	..	26·20	145	99
D Dorstone (Oaklands)	Robert Gray, Esq.	5	1 0	486	..	29·78	171	117
D Hereford (Holmer Hall)	Miss M. S. Hopton	5	1 3	244	25·1	20·48	135	99
D Tyberton Court	Major C. B. L. Warner	5	0 10	276	..	24·13	133	99
Credenhill (Stretton Sugwas)	Capt. S. H. Armitage	5	1 0	226	25·8	21·31	157	106
D Credenhill	F. E. Whiting, Esq.	5	1 5	275	27·5	21·40	129	105
D Clifford School	The Headmaster	5	1 7	490	..	26·51	167	108
D Burghill	F. Boddington, Esq.	5	1 0	310	26·3	19·46	135	96
D Ocle Pychard (Ocle Court)	G. Cresswell, Esq.	8	1 0	298	27·8	22·45	155	105
D Sarnesfield Court	Rev. W. Marshall	5	1 0	378	..	23·65	138	96
D Weobley School	A. J. Dean, Esq.	5	1 0	320	29·5	23·46	169	108
D Pembridge (Moor Court)	C. A. Benn, Esq.	5	1 6	400	..	22·49	134	104
D Pembridge (Burton Court)	Mrs. P. Clowes	5	1 6	400	28·4	23·95	163	105
d Bromyard (Birchyfields)	J. E. Knott, Esq., D.S.O.	5	1 3	545	..	21·78	(144)	(103)
D BROMYARD (Dumbleton Cot.)	Miss M. A. Philpott	5	1 0	393	29·0	22·51	152	109
D Kington (Lynhales)	Mrs. R. F. Hibbert	5	1 0	620	..	23·58	168	105
d Kington (Hill Court)	J. E. Barendt, Esq.	5	0 8	595	..	(24·84)	(159)	(121)
M Kington (Sunset)	H. Langston, Esq.	5	1 6	495	32·0	22·54	..	..
Kington (Golf Club)	C. A. Benn, Esq.	5	1 0	1284	..	23·45	..	..
D Humber Rectory	Rev. B. G. Way	5	1 6	450	30·9	22·45	136	98
D Leominster (Hennor)	Capt. L. R. Hibbert	5	1 1	440	..	21·35	150	97
D Leominster (Fairholme)	E. B. Reynolds, Esq.	5	0 9	285	28·5	22·50	140	103
D Kimbolton (Grantsfield)	J. M. Hutchinson, Esq.	5	1 0	424	28·4	21·50	155	106
D Byton Rectory	Rev. P. D. Irwin	5	1 0	500	..	24·18	173	110

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	STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Aver-age Rain-fall.	1933. Rain-fall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
	HEREFORDSHIRE—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
	2.—SEVERN.—Right Bank Tributaries. 155 sq. mi.								
D	Presteigne (Middlemoor)	A. M. Wilson, Esq.	8	1 0	480	..	24·02	152	113
d	Ledbury (Donnington Hall)	Col. C. Spence-Colby, C.M.G.	5	1 0	..	..	24·09	..	..
D	Much Marcle (The Mount)	Miss A. M. Charles	5	1 0	240	25·8	23·15	157	101
d	Much Marcle (Hall Court)	Mrs. J. J. S. Powell	5	1 0	200	..	23·34	..	..
d	Little Marcle (School House)	J. G. Waggett, Esq.	5	1 3	166	..	21·15	(165)	(100)
d	Ledbury (Underdown)	Head Gardener	5	1 0	307	27·1	23·67	(134)	(98)
	Ledbury (The Twerne)	L. J. C. Riley, Esq.	5	1 0	400	..	23·19	179	114
d	Colwall (The Downs)	F. M. Day, Esq.	5	1 0	500	..	23·12	..	105
D	Colwall (Upper Wyche)	Miss M. E. Coulson	5	0 9	1000	..	(25·60)	177	106
	Cradley (Mill Bank)	Lt.-Col. E. H. Thurlow	5	1 0	320	28·4	22·21	..	98
d	Leintwardine	E Charnock, Esq.	5	1 6	450	31·9	27·86	(186)	(115)
	SHROPSHIRE. (Area, 1343 sq. mi.).								
	1.—MERSEY.—Weaver. 27 sq. mi.								
	2.—DEE. 30 sq. mi.								
D	Ellesmere (Seven Sisters)	C. Adam, Esq.	5	1 0	300	..	17·52	142	98
D	Whitchurch (Fenns Bank)	M. W. Sowden, Esq., C.E.	8	1 0	271	27·1	18·78	139	104
d	Overton (Sodylt Hall)	W. H. Horsfall, Esq.	5	1 0	266	29·7	18·73	..	100
	3.—SEVERN.—Right Bank Tributaries. 722 sq. mi.								
D	Bucknell Vicarage	Rev. W. A. Woodhouse	5	1 0	480	..	24·41	156	113
	Knighton (Lurkenhope Cottage)	Miss M. A. Davies, for M.O.	5	1 0	650	..	25·20	..	..
d	Ludlow (Hill Crest)	C. B. Marston, Esq.	5	1 3	350	..	23·14	..	..
d	Bromfield (Oakly Park)	Head Gardener	6	1 4	300	..	21·34	..	..
D	Bromfield (Warwick House)	F. Brayshaw, Esq.	5	1 0	320	30·3	23·00	166	115
D	Bitterley Grammar Sch.	The Headmaster	5	1 0	509	28·1	26·13	177	127
D	Stanton Lacy Vicarage	Miss I. Armitage	5	1 0	304	28·1	22·92	155	103
d	Culmington Manor	T. W. Shaw, Esq.	5	1 4	575	29·6	24·46	..	109
d	Burwarton Hall	Rt. Hon. Viscount Boyne	5	0 9	894	33·6	24·81	..	114
D	Lydbury North	Erskine Edmonds, Esq.	5	1 0	500	..	23·62	172	114
D	Lydbury North (Totterton)	Major W. H. B. Whitaker	5	1 3	700	30·8	23·11	171	118
D	Bishops Castle (The Vicarage)	Rev. Canon H. J. Smith	5	1 4	596	32·8	23·17	159	111
D	Myndtown Rectory	Rev. C. S. Garbett for R. Met. Soc.	5	1 0	700	..	24·89	152	113
D	Church Stretton (Sewage Works)	E. J. Marsh, Esq.	5	1 0	582	33·7	27·76	173	128
d	Church Stretton (St. Margaret's)	Rev. J. H. Kidson	5	0 11	672	..	28·88	(170)	(131)
D	Bridgnorth (Cantreyn)	W. Bayliss, Esq.	5	1 0	290	26·7	21·70	144	114
D	Chirbury (Marrington Hall)	Lt.-Col. S. D. Price-Davies	5	1 0	490	29·5	21·86	145	115
D	Church Preen (Preen Cottage)	Miss Edith Hopkins	5	1 0	760	29·1	23·66	144	112
D	Church Stretton (Woolstaston)	Mrs. Mathews	5	1 3	745	31·9	25·99	166	121
D	Dorrington School	J. A. Narraway, Esq.	5	1 2	250	..	22·75	165	117
D	Shrewsbury (Beckbury House)	G. H. Horsfall, Esq.	5	0 9	220	22·1	23·18	154	110
D	Shrewsbury (Radbrook Hall)	Maj. D. D. Macpherson, J.P.	5	0 8	235	24·3	21·66	157	111
D	Shrewsbury (Longden Road)	The late W. Deedes, Esq.	5	1 6	250	..	21·09	145	105
D	SHREWSBURY (Monkmoor)	Medical Officer of Health	8	1 0	184	..	20·58	152	109
	4.—SEVERN.—Left Bank Tributaries. 564 sq. mi.								
	Bridgnorth (Coton Hall)	Capt. W. Colville	5	1 6	460	27·8	23·31	142	105
D	Ackleton (The Folley)	H. J. Bath, Esq.	5	1 0	230	..	22·73	173	108
	Ackleton House	F. J. Neale, Esq.	8	1 3	270	..	21·54	..	..
D	Shifnal (Hatton Grange)	Mr. G. Risebrow	5	1 6	262	26·1	24·19	177	119
D	Madeley (C. E. Schools)	The Headmaster	8	1 0	373	..	23·45	130	112
D	Shifnal (Cosford W. W.)	B. L. McMillan, Esq., C.E.	5	0 11	222	..	22·55	157	101
d	Shifnal (National Schools)	The Headmaster	5	1 5	283	28·2	(24·00)	..	..
d	Wellington W. W. (Wrekin Res.)	W. Walker, Esq.	8	2 6	478	25·7	23·39	..	107
D	Shrewsbury (Copthorne)	W. H. Purslow, Esq.	8	1 0	252	..	20·99	154	109
D	Shrewsbury (Coton Hill)	Dr. M. Gepp	5	1 1	190	22·1	19·14	151	103
	Shrewsbury (Fitz Rectory)	Rev. W. Brewster	5	1 2	238	26·2	20·18	..	..
D	Newport (Aston Hall)	Col. R. Leeke	5	0 11	280	27·7	20·56	150	103
	Pentreheylin Hall	H. P. Hall, Esq.	8	2 2	200	..	18·61	..	..
D	NEWPORT (Harper Adams Ag. Coll.)	The Principal	5	1 0	211	24·8	19·81	144	99
D	Newport (Chetwynd Park)	Mrs. Burton Borough	5	1 0	240	28·3	21·19	153	114
D	Grinshill (Sansaw Hall Gardens)	Mrs. Brian Bibby	5	0 10	300	25·7	23·13	195	119
d	Myddle (Marton Hall)	Capt. A. A. Sidney Villar	5	0 9	280	27·4	19·76	..	104

DIVISION VI—WEST MIDLAND COUNTIES—(*con.*).

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	SHROPSHIRE—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
	4.—SEVERN—Left Bank Tributaries—(*con.*).								
D	Cheswardine (Knighton Res.)	Canal Engineer, L.M.& S.R.	8	1 0	351	30·0	23·25	148	107
d	Wem (Senior Schools)	The Headmaster	5	0 8	260	..	17·75	..	..
D	Cheswardine Hall	Col.R.C.Donaldson-Hudson..	5	1 6	530	28·6	23·41	153	103
D	Oswestry (Mount Res.)	G. W. Lacey, Esq., C.E.	5	1 0	698	34·5	23·70	160	124
D	Oswestry (Council School)	E. Compton, Esq.	5	1 0	450	32·4	18·92	149	105
D	Norton-in-Hales School	Chas. Chadwick, Esq.	5	1 3	350	30·5	23·50	171	99
	STAFFORDSHIRE. (Area, 1,171 sq. mi.)								
	1.—MERSEY—Weaver. 50 sq. mi.								
D	Biddulph Grange	The Secretary	5	1 4	570	36·0	29·02	170	119
	2.—SEVERN—Left Bank Tributaries. 160 sq. mi.								
D	Kinver (Prestwood)	F. J. Dixon, Esq., C.E.	5	1 0	179	..	20·53	138	93
D	Kingswinford (Ashwood P.S.)	F. J. Dixon, Esq., C.E.	5	1 0	207	24·9	22·27	134	100
D	Dudley (Shavers End)	F. J. Dixon, Esq., C.E.	5	1 0	745	..	22·92	149	100
D	Dudley (Shavers End) No. 3	F. J. Dixon, Esq., C.E.	5	1 0	745	..	22·92	148	97
d	Wolverhptn. (Dimmingsdale W.W.)	B. L. McMillan, Esq., C.E.	5	0 9	323	..	21·15	(140)	(96)
D	Wolverhampton (Copthorne Rd.)	K. C. Berrington, Esq.	6	0 9	505	..	23·47	146	109
D	Wolverhampton (West Park)	Dr. R. H. H. Jolly	5	1 0	430	27·1	23·07	126	112
D	Tettenhall (The Hollies)	R. C. Sikes, Esq., C.E.	5	1 0	355	26·7	23·49	156	107
D	Tettenhall Waterworks	B. L. McMillan, Esq.	5	0 10	468	..	23·12	153	107
D	Shifnal (Weston Park)	Earl of Bradford	5	1 6	400	27·3	23·91	167	110
D	Norbury Junction	Canal Engineer, L.M. & S.R..	5	1 0	332	28·0	21·98	123	108
D	Market Drayton (Old Springs) *old g.*	F. E. Harding, Esq.	5	1 4	422	28·9	21·60	162	103
D	Maer Hall Gardens	Miss Harrison, M.B.E.	8	1 3	390	32·5	26·06	139	115
	3.—TRENT—Right Bank Tributaries. 518 sq. mi.								
d	West Bromwich (+A)	A. D. Greatorex, Esq., C.E..	8	1 7	543	26·2	(23·39)	(137)	(104)
D	W. Bromwich (Nicholls St.)	H. E. Howle, Esq.	5	1 1	537	..	22·89	154	108
D	Wednesbury (Ocker Hill)	Birmingham Canal Navgtn.	5	1 0	476	..	21·28	142	109
D	Walsall (Bescot Sewage Farm)	J. Taylor, Esq., C.E.	5	0 11	376	26·9	21·80	172	114
D	Walsall (Wednesbury Sew. Wks.)	G. Wicks, Esq.	5	1 0	378	27·9	21·23	159	107
D	Walsall (Pleck)	J. C. W. Day, Esq.	5	1 0	400	..	21·26	160	109
D	Walsall (Gorway)	J. Cleland, Esq.	5	1 0	440	..	22·09	136	104
D	Walsall (Streetly)	J. Cleland Esq.	5	1 0	500	..	20·64	129	97
D	Darlaston (Sewage Works)	S. E. Hammonds, Esq.	8	1 6	393	..	21·17	144	103
D	Bilston (The Lunt Outfall)	A. F. B. Sidwick, Esq., C.E..	8	1 0	419	27·3	21·35	151	98
D	Aldridge (Bourne Vale)	F. J. Dixon, Esq., C.E.	5	1 0	419	25·1	20·60	144	106
D	Wednesfield (Co. School)	The Headmaster	5	1 6	480	..	22·83	128	106
D	Shenstone (Little Hay)	F. J. Dixon, Esq., C.E.	5	1 0	298	..	21·47	151	102
D	Bloxwich (Sneyd Res.)	Birmingham Canal Navgtn.	5	1 0	507	..	23·65	163	111
D	Chasetown	Cannock Chase Colliery Ltd.	5	1 0	508	..	24·39	147	111
D	Brewood (Slade Heath P.S.)	F. J. Dixon, Esq., C.E.	5	1 0	340	24·9	23·11	138	99
D	Hammerwich (Cannock Chase Res.)	Birmingham Canal Navgtn.	5	1 0	475	..	23·82	155	111
D	Cannock (Heath Haves)	Cannock U.D.C.	5	1 0	530	..	21·81	130	108
D	Brewood (Belvide Reservoir)	Canal Engineer, L.M.&S.R..	5	1 0	367	..	26·20	175	116
D	Bishopswood	Rev. A. E. Brown	5	1 2	420	..	21·08	151	104
D	Lichfield (Kingsbarrow)	Miss H. I. Rowland	5	1 0	269	27·5	24·67	176	113
D	Hednesford (Scout House) *new g.*	F. J. Dixon, Esq., C.E.	5	1 0	702	..	24·15	162	114
D	Rugeley (Longdon Lodge)	F. J. Dixon, Esq., C.E.	5	1 0	413	26·1	21·57	151	110
D	Lichfield (Hanch Reservoir)	F. J. Dixon, Esq., C.E.	5	1 0	259	..	22·54	142	107
D	Brereton	The Headmaster	5	1 3	300	..	21·22	130	104
D	Rugeley (Slitting Mill)	F. J. Dixon, Esq., C.E.	5	1 0	299	..	21·87	135	107
D	Rugeley (Brindley Bank)	F. J. Dixon, Esq., C.E.	5	1 0	254	26·3	19·22	135	104
D	Rugeley (Nethermoor)	G. H. Grummitt, Esq.	5	1 0	300	29·2	22·49	135	103
D	Milford Waterworks	W. Plant, Esq., C.E.	5	1 0	246	27·5	24·53	156	106
d	Shugborough	C. G. Baker, Esq.	5	1 0	260	..	(27·13)	(161)	(107)
D	Stafford (Victoria Pleasure Gnd.)	W. Plant, Esq., C.E.	5	1 6	249	27·2	25·88	151	119
D	Eccleshall (Johnson Hall)	Major W. Moat	5	1 2	400	27·5	22·70	145	111
D	Yarlet Hall	K. E. Tarling, Esq.	5	0 9	405	..	25·84	149	116
D	Eccleshall (Sugnall Hall)	C. E. Lowe, Esq.	5	1 0	430	..	25·47	159	114
d	Stone (Meece House)	Head Gardener	5	1 2	750	28·3	22·77	..	..
D	Stone (Meaford Hall)	Lt.-Col. W. S. W. Parker Jervis, D.S.O..	5	0 10	325	29·9	26·72	174	118
D	Standon (Hatton W.W.)	R. C. Frain, Esq., C.E.	5	1 0	355	29·0	27·79	152	118
d	Whitmore, Pumping Station	L. M. & S. Rly.	5	1 0	385	..	(23·28)	(141)	(100)

DIVISION VI—WEST MIDLAND COUNTIES—(*con.*).

STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Rain-gauge: Aver-age Rain-fall.	1933. Rain-fall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
STAFFORDSHIRE—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
3.—TRENT—Right Bank Tributaries—(*cont.*).								
D Newcastle-under-Lyme	W. R. Arundel, Esq.	5	3 0	400	..	24·02	133	107
4.—TRENT—Left Bank Tributaries. 193 sq. mi.								
D Burton Reservoir	F. J. Dixon, Esq., C.E.	5	1 0	309	25·1	20·89	132	90
D Burton (Shobnall)	Messrs. Bass & Co., Ltd.	5	1 0	157	24·6	20·90	149	97
D Burton (Borough Hospital)	Dr. J. M. Cowie	5	1 0	220	..	22·68	145	96
D Stone (Alleyne's Grammar Sch.)	H. Malcolm Fraser, Esq.	5	1 0	415	29·4	24·94	144	103
D Stone (Idlerocks)	Mrs. Wedgwood	5	1 0	740	32·7	24·80	143	110
D Longton (The Meir)	R. C. Frain, Esq., C.E.	5	1 0	617	30·2	27·59	149	111
D Hanley Sewage Works	W. H. Makepeace, Esq.,	5	1 0	386	..	23·66	152	105
5.—TRENT—Dove. 250 sq. mi.								
D Rocester (Dove Leys)	Sir Percival Heywood, Bt.	5	1 6	350	33·5	27·88	153	120
D Oakamoor (Lightoaks)	M. A. Bolton, Esq.	5	1 6	650	..	28·43	150	113
D MAYFIELD* (+A).	Graham C. Lawson, Esq.	8	1 0	374	32·3	26·53	150	106
D Ilam School	The Headmaster	5	0 8	450	..	35·33	169	117
D Cheddleton (County Mental Hosp.)	Mrs. Menzies	5	1 0	550	..	28·41	147	122
D Alstonfield (The Manor)	B. R. S. Pemberton, Esq.	5	1 0	920	39·1	31·41	168	119
D Leek (Wall Grange P. Stn.)	R. C. Frain, Esq., C.E.	5	1 0	457	34·7	26·74	151	121
D Leek (Hillesdon)	A. Y. Worthington, Esq.	5	1 0	750	37·2	28·42	172	124
D Leek (Haregate Hall)	Mr. R. Sutton	5	0 9	680	36·9	30·09	166	127
M Leek (Swains Moor)	W. E. Beacham, Esq., C.E.	5	1 1	993	..	31·96	..	..
M Leek (Withens, Upper Hulme)	W. E. Beacham, Esq., C.E.	5	1 1	1084	..	(29·57)	..	..
WORCESTERSHIRE. (Area, 751 sq. mi.)								
1.—SEVERN—Right Bank Tributaries. 231 sq. mi.								
D Upton-on-Severn (The Eades)	Roger D. Tennant, Esq.	5	0 9	100	26·9	23·79	179	97
D Malvern (British Camp Res.)	W. Osborne Thorp, Esq., C.E.	5	1 0	667	28·5	22·83	143	100
D Malvern (Barnard's Green)	W. Osborne Thorp, Esq., C.E.	5	1 0	130	..	22·99	144	103
D MALVERN (Free Library)	W. Oxborne Thorpe, Esq., C.E.	5	1 0	380	27·6	23·14	152	103
D Malvern (St. James' Road)	Rev. F. H. Fowler	5	1 3	300	..	22·64	140	109
d Malvern (Clarendon School)	Miss E. M. Ingram, B.Sc.	5	1 0	500	28·3	(23·80)	(126)	(99)
D West Malvern	W. Osborne Thorp, Esq., C.E.	5	1 0	832	28·9	23·80	143	105
D Knightwick Sanatorium	Dr. H. Gordon-Smith	5	1 0	300	25·9	21·04	146	102
D Worcester (Diglis Lock)	J. E. Bradley, Esq.	5	1 0	49	24·7	18·69	142	90
D Martley Rectory	Rev. J. F. Hastings	5	1 0	220	26·7	20·31	153	107
D Shelsley Beauchamp	W. Lionel Moore, Esq.	5	0 10	132	..	20·97	126	91
D Ombersley (Holt Lock)	J. E. Bradley, Esq.	5	1 1	55	25·3	18·66	119	87
D Stanford Rectory	Rev. J. B. Hewitt	5	1 1	360	28·4	21·63	117	92
D Stockton-on-Teme (Eardiston)	Miss M. Wallace	5	1 0	200	26·7	23·83	134	101
D Stourport (Astley Town)	J. Armytage Batley, Esq.	5	0 11	175	25·5	19·54	127	93
D Stourport (Dunley Hall)	Sir Sidney Lea, Bt.	5	1 0	240	..	19·62	131	84
D Bewdley (Winterdyne)	Miss K. M. Sturt	5	1 0	175	25·9	20·90	151	94
2.—SEVERN—Left Bank Tributaries. 194 sq. mi.								
D Earl's Croome (Levant Lodge)	F. W. Burnett, Esq.	5	2 0	110	26·3	23·48	155	99
d Kempsey (Napleton Ho.)	Major H. Berkeley Hill	5	1 3	100	26·9	19·16	..	92
D Kempsey Vicarage	Rev. E. B. R. de Jersey	5	0 9	50	..	19·88	141	91
D Worcester (Waterworks)	W. Ransom, Esq., C.E.	5	1 0	52	23·2	17·61	155	98
d Worcester (Little Perdiswell)	Miss M. S. Hewitt	5	1 0	100	..	16·96	..	90
D WORCESTER (PERDISWELL)	The Agricultural Organiser	5	1 0	94	..	17·09	135	94
d Worcester (Bevere Lock)	J. E. Bradley, Esq.	5	1 1	52	24·5	18·91	..	91
D Droitwich (Friar Street Depot)	Borough Surveyor	12	4 0	98	25·4	16·83	127	91
D Bromsgrove (Tardebigge Res.) *new g*	A. J. Cullis, Esq., C.E.	5	1 0	455	27·5	19·61	157	96
D Bromsgrove (Burcot P. S.)	R. S. Broadley, Esq.	5	1 0	432	..	21·08	128	100
D Barnt Green (Upwood)	Miss M. Gibbins	5	1 0	650	..	21·68	164	99
D Stourport (Lincombe Lock)	J. E. Bradley, Esq.	5	1 0	62	25·6	19·52	128	87
D Bromsgrove (Washing Stocks P. S.)	R. S. Broadley, Esq.	5	1 0	366	..	19·64	139	91
d Bewdley (C. E. School)	J. Bates, Esq.	8	1 0	70	26·4	20·96	(130)	(102)

* Previously called Ashbourne (Mayfield House).

DIVISION VI—WEST MIDLAND COUNTIES—(*con.*).

	STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
	WORCESTERSHIRE—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
	2.—SEVERN—Left Bank Tributaries—(*con.*).								
D	Kidderminster (Pumping Stn.)	Sanitary Inspector	5	1 0	103	..	20·06	150	89
D	Kidderminster (Park Hall)	K. H. Wilson, Esq.	5	1 0	200	25·7	23·03	155	93
D	Bewdley (Elan Aqueduct)	J. W. Wilkinson, Esq., C.E.	5	1 0	91	26·7	22·93	153	106
D	Clent Hall	Miss H. M. Wilson	5	1 0	580	..	23·43	139	105
d	Wolverley (Hill Ho.)	J. Christopher Wilson, Esq.	5	0 9	250	..	20·16	..	92
D	Halesowen (Romsley)	F. J. Dixon, Esq., C.E.	5	1 0	614	30·6	25·54	148	99
D	West Hagley (Glenthorpe)	W. Nock, Esq.	5	1 0	400	28·1	23·02	159	103
D	Pedmore (The Dene)	T. Grazebrook, Esq.	5	0 9	340	26·5	20·48	144	99
D	Stourbridge (Pumping Station)	G. P. Deeley, Esq.	8	1 0	212	27·1	24·08	134	98
D	Netherton (Lodge Farm Res.)	Birmingham Canal Navgtn.	5	1 0	445	..	20·82	153	100
D	Dudley (Priory Hall)	F. H. Gibbons, Esq., C.E.	8	1 0	584	..	21·71	154	102
	Dudley (Trindle House) *new g*	S. Staffs. Mines Drain. Comrs.	5	1 0	575	..	23·45	..	..
	3.—SEVERN—Upper Avon. 260 sq. mi.								
D	Bredon (The Croft)	Jasper Lambert, Esq.	5	1 1	120	24·5	21·89	154	104
D	Birlingham Rectory	Rev. C. Price	5	1 0	70	..	20·34	137	90
D	Defford (Upper St.)	A. W. Butler, Esq.	5	2 6	107	24·0	19·90	148	92
D	Evesham (Bengeworth)	Messrs. Ross Bros., Ltd.	5	1 0	128	22·9	20·20	146	97
D	Evesham (Sewage Works)	J. Abbott, Esq., C.E.	5	1 9	85	22·6	18·79	131	89
D	Evesham (Port St.)	Messrs. Craven & Co.	5	1 0	100	..	19·75	149	99
	Pershore (Three Springs)	C. A. Mumford, Esq.	5	3 0	50	..	20·72	..	..
D	Pershore (Southern House)	Miss G. E. Lawson	5	2 3	70	22·2	(18·75)	139	85
d	Pinvin	J. T. Coates, Esq.	5	1 1	114	..	18·39	..	..
d	Evesham (Sheriff's Lench)	Dr. G. E. Harthan	5	1 0	350	..	17·72	..	..
	Alcester (Cookhill)†	T. Barber, Esq.	5	1 0	400	24·5	20·19	137	..
D	Redditch (Hewell Gardens)	Mr. F. Molyneux	5	1 0	469	27·7	18·79	143	98
D	Alvechurch (Fairfield)	D. McMichael, Esq., J.P.	5	1 0	400	29·4	21·71	139	99
D	Bromsgrove (Lr. Bittall Res.) *new g*	A. J. Cullis, Esq., C.E.	5	1 0	457	..	21·79	149	101
	4.—THAMES—Windrush & c. 10 sq. mi.								
	5.—TRENT—Right Bank Tributaries. 56 sq. mi.								
D	Halesowen (Frankley)	J. W. Wilkinson, Esq., C.E.	5	0 10	571	30·7	26·02	175	110
D	Northfield (Frankley Lodge Rd.)	A. A. Barnes, Esq., C.E.	5	1 0	548	..	26·17	164	107
D	Oldbury (Barnford Hill Pk.)	W. Greenwood, Esq., C.E.	5	0 9	607	..	24·28	160	117
	WARWICKSHIRE. (Area, 902 sq. mi.)								
	1.—SEVERN—Upper Avon. 603 sq. mi.								
	Long Compton (Weston Park)	Mrs. H. A. Warriner	8	1 0	510	26·5	20·44	..	86
D	Tredington	N. H. Walton, Esq.	5	1 0	200	..	16·97	147	91
d	Stratford-on-Avon (Crimscote)	Mrs. E. Canning	5	1 1	250	..	18·42	..	90
d	Kineton (Kineton House)	J. Fielden, Esq., J.P.	5	1 6	280	..	20·10	..	110
d	Stratford-on-Avon (Milcote)	F. W. Jones, Esq., C.E.	5	1 6	122	23·6	17·85	..	97
D	Stratford-on-Avon (Thurlaston)	Miss M. A. Everard	5	0 11	134	24·2	18·59	153	93
D	Stratford-on-Avon (Shottery Hall)	R. C. Carter, Esq.	8	1 0	140	23·9	18·96	160	98
D	Bidford (Moor Hall)	(+A) E. H. Cubberley, Esq.	5	1 0	125	24·0	18·06	148	92
d	Temple Grafton Court	L. Lonsdale, Esq.	8	1 3	270	24·8	17·85	..	..
d	Alcester (Ragley Hall)	Mr. C. Harding	5	1 0	270	25·8	19·91	..	100
D	Stratford-on-Avon (Clopton Ho.)	A. W. Beecham, Esq.	5	1 0	210	..	17·15	149	87
	Ashorne (Victoria Cottage)	G. T. Osborn, Esq.	5	1 0	160	24·7	19·57	..	..
D	Stratford-on-Avon (Snitterfield)	F. W. Jones, Esq.	5	1 6	274	25·2	17·27	145	100
D	Southam (Stockton House)	G. B. Blyth, Esq.	6	1 4	394	23·1	17·76	163	102
d	Studley College	The Head Mistress	5	0 9	235	27·0	18·63	..	..
D	Warwick Castle Gardens	Mr. H. F. Smale	5	1 0	197	25·3	19·60	154	100
D	Leamington Spa (Pump Rm. Gdns.)	Medical Officer of Health	8	1 0	163	24·0	18·29	144	92
D	Leek Wootton (The Lodge)	W. F. Mitchell, Esq.	5	1 0	249	..	22·63	163	101
D	Dunchurch Hall	C. H. Cooke, Esq.	5	1 1	400	..	20·87	172	109
D	Dunchurch Lodge Gardens	Major H. S. Cayzer	5	1 0	380	24·4	21·49	140	112
D	Stretton-on-Dunsmore (Manor Ho.)	Mrs. Lister-Kaye	5	1 0	280	..	21·17	131	114
D	Rugby (Bilton Grange) *new g*	Mr. J. S. Buckby	5	1 0	400	..	20·68	139	100
D	Rugby (Caldecott)	Headmaster, Rugby School.	5	1 0	383	25·6	16·47	152	99
D	Rugby (Avon W.W.)	W. H. Spicer, Esq., C.E.	5	1 0	282	..	19·13	153	105

† Station previously at Cookhill Co. School.

DIVISION VI—WEST MIDLAND COUNTIES—(*con.*).

	STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Rain-gauge: Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
	WARWICKSHIRE—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
	1.—SEVERN—Upper Avon—(*con.*).								
d	Ryton-on-Dunsmore (Ryton Ho.)	Charles Browett, Esq.	5	1 2	260	26·0	21·94	..	103
D	Coventry (Whitley P. S.)	City Engineer, Coventry	8	1 0	238	..	20·98	148	104
D	Coventry (Stoke) (+A)	W. R. Griffiths, Esq.	5	1 0	267	..	21·58	142	96
D	Coventry (City Hospital)	Medical Officer of Health	8	1 0	270	26·0	21·84	157	105
D	Astley Vicarage	Rev. I. F. H. Carr-Gregg	5	1 0	440	..	21·73	150	111
	2.—THAMES—Windrush & c., 2 sq. mi.								
	3.—THAMES—Cherwell. 15 sq. mi.								
	4.—TRENT—Right Bank Tributaries. 282 sq. mi.								
D	Northfield (Wych Elm)	J. B. Shewell, Esq.	5	1 4	540	29·3	23·68	153	104
D	Highters Heath Res.	J. W. Wilkinson, Esq., C.E.	5	1 0	517	..	24·17	153	110
D	Northfield (Bartley Res. No. 1)	A. A. Barnes, Esq., C.E.	5	1 0	600	..	25·48	158	98
D	Moseley (Cotton Lane)	U. A. Baker, Esq.	5	1 0	450	..	23·88	155	112
D	Bartley (Bromwich Wood)	J. W. Wilkinson, Esq., C.E.	5	1 0	611	..	26·12	157	106
D	Selly Oak (Bournville)	Messrs. Cadbury Bros., Ltd.	8	1 0	469	29·1	24·52	163	109
D	Selly Oak (Witherford Way)	Mrs. Neave	8	1 6	530	..	24·17	164	104
D	Selly Oak (Frederick Rd.)	W. Garden, Esq.	5	1 2	540	29·2	23·67	155	106
D	Birmingham (Sparkhill)	D. H. Owen, Esq.	5	1 0	425	28·1	23·31	152	106
D	Birmingham (Edgbaston)	Midland Inst. (A. J. Kelley)	8	1 6	535	26·5	24·02	156	102
D	Birmingham (Carpenter Road)	L. Ashby Bolton, Esq.	5	1 1	480	28·1	23·20	167	105
D	Birmingham (Icknield Port)	Birmingham Canal Navgtn.	5	1 0	490	..	22·73	154	102
D	Nuneaton (The Quarry)	Miss K. E. Smith	5	1 0	321	..	22·51	171	109
D	Ullesthorpe (High Cross)	J. Parker Toone, Esq.	5	1 0	..	..	22·17	168	115
D	Birmingham (Handsworth Park)	The City Engineer	8	1 4	424	..	23·22	140	105
D	Whitacre (Birmingham W.W.)	J. W. Wilkinson, Esq., C.E.	5	1 0	269	26·0	20·92	152	99
D	Birmingham (Erdington) *new g.*	J. W. Wilkinson, Esq., C.E.	5	1 0	442	..	23·61	162	108
D	Birmghm. (Erdington, Spring Ln.)	The City Engineer	8	1 0	386	..	23·31	156	109
D	Minworth Greaves	Birmingham Drainage Bd.	8	1 0	259	24·3	21·99	153	104
D	Nuneaton P.S. (*old g.*)	R. C. Moon, Esq., C.E.	8	1 3	269	..	17·69	147	95
D	Nuneaton (Hartshill Sewage Wks.)	R. C. Moon, Esq., C.E.	5	1 2	288	..	19·68	142	95
D	Sutton Coldfield (The Park)	Borough Surveyor	5	1 0	370	26·4	22·93	149	116

DIVISION VII—NORTH MIDLAND COUNTIES.

	LEICESTERSHIRE. (Area, 824 sq. mi.)								
	1.—SEVERN—Upper Avon. 41 sq. mi.								
	Rugby (Calthorpe Manor)	W. G. Douce, Esq.	10	4 0	400	..	18·10	..	..
D	Welford (The Reservoir)	Grand Union Canal Co.	5	1 6	430	25·1	21·61	176	126
	Lutterworth (Leicester Rd.)	M. W. Binns, Esq.	5	1 0	430	..	22·63	..	..
d	Lutterworth (Waterworks)	The Surveyor	8	1 9	414	..	21·21	..	103
	2.—WELLAND. 96 sq. mi.								
D	Market Harborough (Gardiner St.)	G. C. Wooldridge, Esq.	5	1 0	280	..	17·41	160	98
D	Market Harborough (Rose Hill)	G. O. Nicholson, Esq.	5	1 0	350	24·7	18·67	136	97
D	Kibworth Beauchamp	Dr. E. V. Phillips	5	1 0	390	25.7	18·03	141	107
D	East Norton	Mrs. F. A. Wortley	5	1 0	460	..	20·50	139	101
D	Knossington Rectory	Rev. G. G. Wilkinson	5	1 0	580	26·2	24·41	130	107
	3.—WITHAM. 7 sq. mi.								
	4.—TRENT—Right Bank Tributaries. 680 sq. mi.								
D	Frolesworth	W. P. Widdowson, Esq.	5	1 0	370	..	20·75	148	102
D	Peatling Magna (Peatling Ho.)	Dr. C. Royds Jones	5	1 1	354	..	18·42	149	99
D	Hinckley (Edward Street)	E. H. Salter, Esq.	5	1 0	425	..	23·58	161	115
D	Wistow Hall Gardens	The Lord Cottesloe, C.B.	5	1 0	309	23·6	20·99	140	110
D	Countesthorpe (Wigston Sew. Fm.)	The Surveyor	8	0 9	257	22·8	19·10	161	106
d	Leicester (London Rd.)	L. Herbert, Esq.	5	4 0	300	..	22·51	..	..
D	Leicester (Stoughton Drive)	Theodore B. Ellis, Esq.	5	1 0	315	..	20·12	141	109
D‖	Leicester (Town Hall Square) (+A)	A. T. Gooseman, Esq., C.E.	5	1 0	212	..	18·70	142	88
D	Leicester City Mental Hosp.	The Steward	8	1 0	266	24·2	21·06	161	108
D	Leicester (Gilroes Cemetery)	A. T. Gooseman, Esq., C.E.	5	1 0	285	..	21·28	127	111
D	Leicester (Groby Road)	Miss V. D. Ellis	5	1 0	244	25·0	23·57	167	111
D	Osbaston Hall	Sir Thomas Cope, Bart.	8	1 0	393	..	21·82	152	111
D	Lowesby Hall Gdns.	Mr. T. Hardie	5	1 0	380	..	22·36	133	101

‖ Record too low, gauge over-sheltered.

DIVISION VII—NORTH MIDLAND COUNTIES—(*con.*).

STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Rain-gauge: Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
LEICESTERSHIRE—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
4.—TRENT—Right Bank Tributaries—(*con.*).								
D Thornton Reservoir	G. T. Edwards, Esq., C.E.	8	1 2	370	26·2	23·32	138	119
D Cropstone (Bradgate Res.)	G. T. Edwards, Esq., C.E.	8	1 0	245	27·2	23·41	153	109
D Barkby Hall	Victor R. Pochin, Esq.	5	1 0	227	24·5	22·08	148	103
D Swithland (The Brand)	G. T. Edwards, Esq., C.E.	8	1 0	171	26·0	23·98	147	113
d Ashby-de-la-Zouche	Miss A. I. Bayford	5	0 10	450	..	22·40	(136)	(103)
D Barrow-upon-Soar (The Mount)	Mrs. A. W. Marshall	5	1 6	..	23·6	19·95	135	96
D Charnwood Forest (Charley Hall)	Mrs. J. B. Martin	5	0 9	450	..	26·82	122	105
D Hoby (The Grange)	A. A. Ironside, Esq.	5	1 0	235	..	20·22	140	103
D Asfordby Rectory	Rev. W. R. Finch	5	0 10	212	..	18·49	138	100
D Asfordby Hill (Ironworks)	Stanton Ironworks Co., Ltd.	5	1 1	324	..	20·81	145	99
D Melton Mowbray (White Lodge)	H. K. Barker, Esq.	8	1 6	237	22·9	23·30	175	105
D Charnwood For. (Blackbrook R.)	W. Granger, Esq., C.E.	5	1 0	379	26·4	23·54	122	102
D Loughborough (Park Road)	W. Llewellyn Mold, Esq.	5	1 0	190	23·7	21·26	149	94
D Loughborough (Nanpantan Res.)(+A)	W. Granger, Esq., C.E.	5	1 0	269	26·1	24·21	153	106
D Loughborough (Fairmount Drive)	B. N Wale, Esq., B.Sc.	5	0 6	210	..	22·42	134	91
D Loughborough (The Widenings)	Mrs. A. Butler	5	1 0	197	24·5	21·42	169	112
D Loughborough (Sewage Farm)	W. Granger, Esq., C.E.	8	1 0	135	23·1	19·09	141	94
D Burton-on-the-Wolds (Burton Hall)	Earl of Huntingdon	5	1 0	270	24·2	20·32	139	112
D Prestwold Hall Gardens	Mr. W. Coe	8	1 0	209	24·7	20·23	139	113
D Grantham (Belvoir Cas. Gdns.)	The Duke of Rutland, K.G.	8	1 0	259	25·1	20·89	151	100
RUTLAND. (Area, 152 sq. mi.)								
1.—WELLAND. 125 sq. mi.								
D Uppingham (Ridlington)	C. Wortley, Esq.	5	1 0	527	25·3	20·65	146	106
D Hambleton Manor	Major J. Orr-Ewing, M.C.	5	1 0	400	23·9	21·37	138	103
2.—WITHAM. 5 sq. mi.								
3.—TRENT—Right Bank Tributaries. 22 sq. mi.								
LINCOLNSHIRE. (Area, 2,646 sq. mi.)								
1.—NENE. 100 sq. mi.								
D Tydd (North Level Sluice)	Mr. S. Fovargue	5		10	*23·7*	17·87	131	92
2.—WELLAND. 341 sq. mi.								
d Crowland	F. Husband-Clutton, Esq, M.R.C.S.	5	1 0	10	*21·9*	18·02	..	83
D Market Deeping (Wilsthorpe)	W. H. A. Court, Esq., C.E.	8	1 0	51	*20·9*	18·15	136	94
D Deeping St. Nicholas	T. A. Pick, Esq.	5	0 11	11	..	13·70	145	89
D Spalding (Pode Hole)	H. Bain, Esq.	8	1 3	12	23·5	19·10	197	114
D Bourne (Guthram)	F. Sanderson Robins, Esq., C.E.	8	1 6	19	*21·1*	16·00	152	95
d Spalding (Spalding Marsh)	Messrs. Seymour Cobley, Ltd.	5	0 8	0	*21·6*	17·26	..	92
D Holbeach (Bingham Lodge)	V. A. C. Durand, Esq.	5	4 0	10	..	17·78	125	99
3.—WITHAM & C. 1085 sq. mi.								
d Stainby Rectory	Rev. W. L. de B. Thorold	4	0 9	496	*24·5*	21·10	..	..
D Denton Manor	Sir C. G. E. Welby, Bt., C.B.	5	1 0	310	*25·6*	20·35	147	110
D Grantham (Saltersford)	H. Preston, Esq.	5	0 6	188	*24·1*	18·88	155	109
d Grantham (Central School)	The Headmaster	5	0 8	192	..	18·26	..	..
d Culverthorpe	E. H. Davies, Esq.	5	1 2	200	*24·9*	(20·73)	..	..
D Wyberton (Tytton Hall)	V. A. C. Durand, Esq.	5	1 0	10	..	19·39	154	110
d Fishtoft School	W. Rimington, Esq.	5	1 0	0	*20·8*	19·10	..	..
D Boston (Black Sluice, Skirbeck)	F. S. Robins, Esq., C.E.	8	1 3	11	22·8	19·97	171	113
D Boston (Grand Sluice)	F. H. Tomes, Esq., C.E.	8	1 0	10	*22·9*	19·47	154	114
D Boston (Bargate End)	A. O. Scrivener, Esq.	8	1 4	9	*21·6*	18·03	152	99
D East Heckington	V. A. C. Durand, Esq.	5	1 0	15	..	20·15	131	102
D Leasingham Rectory	Rev. A. R. Tucker	5	1 6	100	..	18·66	124	92
D Cranwell (Aerodrome) (+A)	Officer-in-Charge	8	1 0	240	23·2	19·91	158	95
D New Leake (Lade Bank Engine)	V. A. C. Durand, Esq.	5	1 0	10	*22·6*	18·18	123	92
D Carrington Grange	T. J. Ward, Esq.	5	6 0	15	*23·4*	20·33	140	113
D Wellingore	Rev. Canon H. Powell Smith	5	1 0	246	*23·3*	26·03	189	119
D Poston (Eastville)	V. A. C. Durand, Esq.	5	1 0	10	..	19·79	142	98
D Navenby Rectory	J. Thompson, Esq.	5	1 0	218	*24·5*	24·23	153	114
D Carlton-le-Moorland	J. Brocklebank, Esq.	5	1 2	50	*23·3*	21·09	145	112
D Blankney Hall Gardens	Mr. N. G. Cleaver	5	0 9	57	*24·0*	25·19	174	114
D East Kirkby (E. Kirkby Manor)	Capt. R. S. Fieldsend	5	1 0	35	*23·8*	22·98	172	127

DIVISION VII—NORTH MIDLAND COUNTIES—(*con.*).

	STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Rain-gauge: Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
	LINCOLNSHIRE—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
	3.—WITHAM & C.—(*con.*).								
d	Revesby Reservoir	T. H. Tyson, Esq.	5	2 0	124	24·5	20·81	..	100
D	Woodhall Spa (Galen House)	J. Collins, Esq.	5	1 6	38	*22·9*	20·31	149	107
D	Woodhall Spa	J. Collins, Esq.	5	1 0	40	*23·4*	20·05	150	103
D	Horncastle	F. J. Harvey, Esq.	5	1 0	120	*24·8*	21·40	166	107
D	Lincoln (Swallowbeck)	W. R. Pennell, Esq.	8	1 0	34	*22·9*	21·18	161	109
d	Lincoln (Skellingthorpe Hall)	A. H. Bergne-Coupland, Esq.	5	1 0	40	23·1	19·97	..	105
D	Hackthorn Hall	Major W. C. Amcotts, M.C., J.P.	5	4 8	102	*23·2*	21·14	176	110
D	Springthorpe Rectory	Rev. B. Davies	5	1 0	73	*23·6*	22·15	135	112
	4.—GREAT EAU & C. 443 sq. mi.								
D	Wainfleet (Thorpe Culvert)	V. A. C. Durand Esq.	5	1 0	10	..	18·33	146	100
D	Little Steeping	V. A. C. Durand, Esq.	5	1 0	10	..	19·14	149	105
D	Skegness (Marine Gardens)	The Surveyor	8	1 0	15	23·3	16·39	131	96
D	East Keal Rectory *new* g	Rev. R. H. Simpson	5	0 6	180	*25·2*	21·71	170	123
D	Spilsby	J. E. Bolt, Esq.	5	1 4	124	*26·3*	21·31	152	123
D	Hagworthingham (Glebe House)	Mr. R. Wright	5	1 0	240	*27·2*	21·40	160	120
D	Mablethorpe (Trusthorpe Hall)	I. N. Woodiwiss, Esq.	8	1 3	10	*25·2*	19·94	165	109
D	Mablethorpe	Borough Surveyor	5	1 0	7	*24·0*	20·42	147	105
D	Louth (Westgate)	Rev. W. E. Yates	5	0 9	120	28·0	20·74	170	116
D	Wold Newton Manor	W. Maurice Wright, Esq.	5	1 6	230	*27·2*	23·65	193	126
D	Grainsby Hall	Mr. J. Butters	5	1 0	75	*27·2*	23·46	191	124
	5.—HUMBER—Right Bank Tributaries. 428 sq. mi.								
D	North Willingham House	Mrs. Charles Wright	5	3 0	125	*28·6*	25·23	198	139
D	Glentham (Bishopbridge)	A. R. Haynes, Esq.	5	1 1	20	..	20·83	155	110
D	Brigg (Thornholme)	E. I. Brown, Esq.	5	1 5	22	..	21·44	157	111
D	Brigg (Wrawby Road)	A. R. Haynes, Esq.	5	1 1	22	*25·0*	21·68	156	110
D	Cleethorpes (Kings Parade)	The Engineer & Surveyor	5	1 0	23	*24·0*	21·03	152	98
D	Grimsby (Portland Place)	W. J. Wood, Esq., C.E.	5	2 0	20	*24·7*	21·77	176	119
D	Grimsby (Westlands)	Major G. L. Bennett	5	1 0	23	*23·7*	20·87	153	117
D	Brocklesby Park	Mr. J. Chisholm	5	1 0	90	*27·0*	24·32	159	114
D	Ulceby (Wooton Lodge)	H. M. Webb, Esq.	5	1 5	100	*27·1*	22·66	153	110
D	Ferriby Sluice	F. Straw, Esq.	5	1 0	18	*24·5*	22·39	167	106
	6.—TRENT—Right Bank Tributaries. 172 sq. mi.								
d	Woolsthorpe	L. and N.E. Rly.	5	1 3	182	*23·4*	19·48	..	94
D	Torksey	Miss M. Burtt	5	3 0	18	*23·2*	20·59	146	97
d	Gate Burton Hall	The Hon. Mrs. Sandars	5	1 0	97	*23·1*	20·75	..	92
	7.—TRENT—Left Bank Tributaries. 77 sq. mi.								
D	Wroot (S. Level Pump Station)	Mr. A. J. Trafford	10	1 6	8	*21·7*	22·00	152	91
d	Crowle (N. Level Pump Station)	Mr. H. G. Trafford	5	2 0	10	*22·0*	23·71	..	..
D	Crowle (Snowdrop Villa)	Crowle Drainage Board	5	1 0	15	..	23·59	170	99
	NOTTINGHAMSHIRE. (Area, 843 sq. mi.)								
	1.—WITHAM. 10 sq. mi.								
	2.—TRENT—Right Bank Tributaries. 218 sq. mi.								
D	Sutton Bonnington (Agric. Coll.) (+A)	The Principal	5	1 0	157	21·7	18·97	129	92
D	Ruddington (Westlands)	J. D. Walker, Esq.	5	1 0	100	24·3	20·93	146	100
D	Nottingham (Wilford Hill Res.)	F. W. Davies, Esq., C.E.	8	1 0	295	23·1	21·09	144	105
D	East Bridgford	G. W. Beaumont, Esq.	5	1 0	150	..	21·11	140	98
D	Newark	J. H. Clarke, Esq., C.E.	5	0 9	43	23·4	20·74	155	104
d	Newark (Sewage Works)	J. H. Clarke, Esq., C.E.	5	1 0	33	..	(20·18)	..	..
d	North Collingham	Miss M. Bergne-Coupland	5	1 6	40	..	20·82	..	101
	3.—TRENT—Derwent. 2 sq. mi.								
	4.—TRENT—Erewash. 42 sq. mi.								
D	Nottingham (Strelley)	late Major T. L. K. Edge	8	1 0	386	26·2	20·53	157	104
D	Nottingham (Strelley Hall) *new*	late Major T. L. K. Edge	5	1 0	377	..	19·97	143	103
D	Bulwell (Watnall Reservoir)	F. W. Davies, Esq., C.E.	8	1 0	468	29·0	24·89	150	118
D	Eastwood Waterworks	F. W. Davies, Esq., C.E.	8	1 3	243	25·9	22·47	157	97
D	Eastwood Hall	Messrs. Barber, Walker & Co., Ltd.	5	1 0	218	..	23·42	140	104
D	Eastwood (Moorgreen Res.)	L. and N. E. Rly. Co.	5	2 0	301	27·4	22·22	148	94

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NOTTINGHAMSHIRE—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
5.—TRENT—Left Bank Tributaries. 569 sq. mi.								
D ATTENBOROUGH	Messrs. Granger	8	1 0	89	..	20·80	161	98
D Beeston (Council Depot)	E. A. Bush, Esq.	5	1 0	121	24·5	20·86	145	97
D Bramcote Reservoir	F. W. Davies, Esq., C.E.	8	1 0	327	..	19·76	149	98
D Nottingham (Trent Lane)..(+A.)	T. Wallis Gordon, Esq., C.E.	8	1 0	83	22·5	20·52	145	96
D NOTTINGHAM (The Castle)	T. Wallis Gordon, Esq., C.E.	8	1 0	192	23·6	19·84	151	94
D Nottingham (Colwick Hill Res.)	F. W. Davies, Esq., C.E.	8	1 0	314	..	19·73	131	92
D Nottingham (Burford Road)	A. B. Tinn, Esq.	5	1 0	170	25·3	22·84	152	99
D Nottingham (Stoke Bardolph)	T. Wallis Gordon, Esq., C.E.	8	1 0	66	22·6	20·69	146	83
D Nottingham (Mapperley Hill)	Dr. G. L. Brunton	8	1 0	400	24·9	20·91	146	98
D Bagthorpe (Isolation Hospital)	Dr. Cyril Banks	8	2 0	190	25·3	22·46	166	101
D Nottingham (Basford W.W.)	F. W. Davies, Esq., C.E.	8	1 0	168	24·3	20·91	139	98
d Burton Joyce Waterworks	F. W. Davies, Esq., C.E.	8	1 0	65	25·2	20·98	..	94
D Bulcote (Corporation Farm)	T. Wallis Gordon, Esq., C.E.	10	1 3	65	23·6	21·96	131	87
Lowdham (Chilwell Nurseries)	A. J. Pearson, Esq.	5	1 6	90	..	(20·17)	..	..
D Bulwell (Bestwood W.W.)	F. W. Davies, Esq., C.E.	8	1 0	312	25·7	21·22	151	99
D Daybrook (Red Hill Reservoir)	F. W. Davies, Esq., C.E.	8	1 0	404	26·8	22·78	171	97
D Daybrook (Ramsdale Hill Res.)	F. W. Davies, Esq., C.E.	8	1 0	504	28·1	24·31	184	105
D Bulwell Hall Park	T. Wallis Gordon, Esq., C.E.	8	1 0	252	27·3	22·12	144	102
D Papplewick (Waterworks)	F. W. Davies, Esq., C.E.	8	1 0	317	27·0	23·00	133	101
D Southwell (The Residence)	Vn. Acdn. W. J. Conybeare.	5	1 0	100	24·7	20·74	146	98
d Sutton-in-Ashfield (Rushley P.S.)	Messrs. G. & F. W. Hodson.	5	1 0	462	27·1	22·92	..	..
D Sutton-in-Ashfield (Sewage Wks.)	F. J. Grierson, Esq.	5	1 0	453	28·9	24·15	146	105
d Mansfield (Rainworth W.W.)	J. Gibson, Esq., C.E.	5	1 0	360	27·5	21·75	..	97
D Mansfield (Rosemary Boys' Sch.)	A. J. Rippon, Esq.	5	0 6	360	..	23·83	153	110
D MANSFIELD (Carr Bank)	Borough Surveyor	8	0 10	357	..	24·47	129	96
D Mansfield (West Bank)	W. Pickard, Esq.	8	1 0	405	27·6	26·23	167	104
d Mansfield (Debdale Hall)	Francis N. Ellis, Esq.	5	1 6	400	28·1	24·28	..	97
D Clipstone Waterworks	J. Gibson, Esq., C.E.	5	1 0	225	25·9	21·56	135	94
Warsop	The Surveyor	8	1 0	192	..	22·50	..	97
D Ollerton (Boughton W.W.)	F. W. Davies, Esq., C.E.	8	1 0	141	24·6	20·46	160	94
D Ollerton (Thoresby Gardens)	Mr. A. J. Simmons	5	1 0	125	26·6	20·80	132	102
D Welbeck Abbey	Mr. Chas. Harris	8	0 10	196	..	23·40	167	102
D Clumber Gardens	The Agent	5	1 0	164	..	23·33	136	103
D Elkesley Pumping Station	Lincoln, W.W.	5	1 0	120	24·0	20·00	143	97
D Worksop (Osberton Gardens)	Mr. A. Nicholson	5	3 0	70	23·8	18·60	166	104
D Retford (Morton Hall)	W. H. Mason, Esq.	9	1 0	140	23·7	20·05	141	93
D Retford (Sewage Disposal Wks.)	R. E. Wilson, Esq.	5	1 0	74	..	19·67	126	99
D Retford (Babworth Hall)	Major J. A. C. Whitaker	5	1 0	98	22·9	18·47	137	89
D Worksop (Wigthorpe Hill)	R. C. P. Ramsden, Esq.	5	1 0	100	23·7	22·51	144	99
D WORKSOP (Hodsock) ....(+A)	Miss E. F. Mellish	8	1 0	56	23·6	22·11	161	100
D Harworth Colliery	Messrs. Barber, Walker & Co.	5	1 0	120	..	21·17	148	96
D Scrooby	Mr. J. Mallender	5	1 0	40	23·1	22·48	172	106
D Bawtry Hall (The Gardens)	Mr. F. E. Hogbin	5	1 0	31	23·1	23·72	146	98
d Bawtry Council Sch.	J. Rushworth, Esq.	5	1 0	37	..	(23·40)	(138)	(100)
6.—OUSE—Don. 2 sq. mi.								
DERBYSHIRE. (Area, 1,029 sq. mi.).								
1.—MERSEY, UPPER. 93 sq. mi.								
D Fernilee (Wythen)†	T. Dearden, Esq.	5	1 0	1100	..	34·83	166	135
D Fernilee (Upr. Hall Farm)	T. Dearden, Esq.	5	1 0	960	..	34·54	165	135
D Hayfield (Kinder)	T. Dearden, Esq.	5	1 6	940	..	33·83	178	134
D Glossop W.W. (Swineshaw)	Geo. Faulds, Esq., C.E.	12	1 0	733	43·2	33·74	164	127
Bleaklow Hill (Dowstone Rocks)	Manchester Corpn. W.W.	5	1 0	1718	..	44·12	..	..
Bleaklow Hill (Far Black Clough)	Manchester Corpn. W.W.	5	1 0	1683	..	44·87	..	..
2.—MERSEY—Weaver. 2 sq. mi.								
3.—TRENT—Right Bank Tributaries. 68 sq. mi.								
D Melbourne Vicarage	Rev. E. T. Harcombe	10	1 0	180	25·6	22·67	132	101
D Repton (The Croft)	H. C. Hayward, Esq.	5	1 2	170	..	21·92	142	95
D Stanton-by-Bridge W.W.	H. Raven, Esq., C.E.	8	1 2	144	24·2	21·86	159	101
4.—TRENT—Dove. 156 sq. mi.								
d Rodsley Pumping Station	The Engineer	5	1 0	405	..	23·55	(135)	(101)
D Ashbourne Vicarage	Rev. Canon F. L. Shaw	5	1 6	500	34·7	28·61	171	121

† Formerly called Upr. Hall Farm, 2.

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DERBYSHIRE—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
5.—TRENT—Left Bank Tributaries. 84 sq. mi.								
d Etwall (Blakeley Lodge)	G. Edge Laban, Esq.	5	1 0	190	24·1	22·20	..	98
D Etwall (Sewage Farm)	Mr. B. Hydes	5	1 8	201	23·2	23·86	127	103
D Etwall Hall	Col. M. Dawson	5	1 3	235	..	25·91	138	98
D Mickleover (C. Mental Hospital)	Medical Superintendent	5	1 0	300	24·4	24·47	127	99
D Littleover (The Knoll)	W. Blews Robotham, Esq.	5	1 0	300	25·2	23·85	155	113
D Littleover (Hilltop)	E. McInnes, Esq.	5	1 0	346	25·8	25·18	166	114
6.—TRENT—Derwent. 428 sq. mi.								
D Spondon (Derby Sewage Wks.)	E. H. Bennett, Esq., C.E.	5	1 3	135	25·5	21·47	141	93
D Spondon Hall	Sir H. Fowler, K.B.E., LL.D.	5	1 0	230	26·7	24·89	165	115
D Derby (Park Grove)†	Messrs. J. Davis & Son, Ltd.	5	1 0	198	..	25·06	139	104
D Derby (L. M. & S. Railway)	A. F. Bound, Esq.	5	1 0	156	25·1	20·87	133	86
D Derby (Royal Infirmary)	W. Banks, Esq.	5	1 0	190	26·3	24·66	149	111
D Derby (The Arboretum) (+A)	E. H. Bennett, Esq., C.E.	8	1 0	196	26·2	23·61	149	96
D Mackworth Vicarage	Rev. W. G. Clark-Maxwell	5	1 0	280	..	23·98	131	104
D Breadsall Priory	E. S. Haslam, Esq.	5	1 3	360	..	24·24	123	96
D Duffield (The Kirkstyles)	Messrs. J. Davis & Son, Ltd.	5	2 0	235	28·3	26·74	150	111
D Belper (Herbert Strutt School)	The Principal	5	0 8	222	29·9	25·01	162	113
D Belper (Quarry Bank)	J. Hunter, Esq., C.E.	5	0 10	280	29·7	24·88	155	105
d Ambergate Reservoir	No. 61. S. B. Winser, Esq., C.E.	5	1 0	700	28·9	23·43	(145)	(113)
D Wirksworth	The Surveyor, U.D.C.	5	1 1	690	..	27·18	164	114
d Whatstandwell (Meerbrk. Sough)	Messrs. G. & F. W. Hodson.	5	1 0	246	33·6	27·78	(147)	(107)
D Brackenfield (Lindway Res.)	R. F. Ward, Esq., C.E.	5	1 0	595	31·9	24·42	129	105
D Matlock Bath (Lower Tower)	Miss E. Chadwick	5	1 1	500	33·7	26·56	153	110
D Matlock (Rockside Hydro.)	J. H. Goodwin, Esq.	5	1 0	637	32·6	26·21	138	108
D Darley Dale (Whitworth Inst.)	E. Evans, Esq.	5	1 0	361	32·9	27·25	143	105
D Clay Cross (Press Reservoirs)	Gilbert Frith, Esq., C.E.	8	1 0	810	31·7	24·13	162	111
M Buxton (Hurdlow Top)	L. M. & S. Rly.	8	1 10	1267	..	35·25	..	..
D Chatsworth Gardens	Mr. J. G. Weston	5	1 0	436	34·7	25·36	151	112
D Baslow (Titheacre)	Mrs. S. E. Milner, O.B.E.	5	1 6	500	..	28·63	146	107
d Baslow (Over End)	A. E. Payne, Esq.	5	1 0	500	33·3	26·40	(153)	(111)
D Buxton (Portobello Bar)	F. Langley, Esq., C.E.	8	1 0	1600	55·9	35·95	181	127
D Buxton (Stanley Moor)	F. Langley, Esq., C.E.	8	1 0	1340	52·1	34·37	180	127
D Buxton (Burbage Edge)	F. Langley, Esq., C.E.	8	1 0	1400	52·8	34·78	181	132
D Buxton (Ashwood Dale S.W.)	F. Oliver, Esq.	5	3 0	1070	..	33·39	169	134
D Buxton (Terrace Slopes)	The Town Clerk	8	1 0	1007	48·4	34·50	164	125
D Buxton (Lightwood)	F. Langley, Esq., C.E.	8	0 11	1191	..	33·31	178	138
D Bamford (Engineer's Office)	No. 60. S. B. Winser, Esq., C.E.	8	2 1	510	37·8	31·17	187	135
D Bamford Filters	No. 70A. S. B. Winser, Esq., C.E.	8	1 0	656	39·1	30·98	182	129
w Froggatt Edge (Stoke Flat)	J. G. Bown, Esq.	5	1 0	960	36·5	29·88	..	..
d Eyam Rectory	Rev. C. L. O'Ferrall	5	1 0	820	37·8	28·28	..	..
d Holmesfield (Barbrook Res.)	Gilbert Frith, Esq., C.E.	8	1 0	1080	35·6	29·25	..	113
Holmesfield (White Edge)	Sheffield Corporation W.W.	5	1 0	1209	..	31·49	..	..
D Burbage (Lower Burbage) (+A)	Sheffield Corporation W.W.	8	1 0	924	36·2	32·94	164	122
d Hope (Cement Works)	Messrs. S. & T. Earle, Ltd.	5	1 2	580	..	30·89	(144)	(120)
D Hope (Killhill Bridge)	No. 56. D. W. Chadwick, Esq.	5	1 0	500	40·4	31·22	163	129
d Bamford (Yorkshire Br. Weir)	59A. S. B. Winser, Esq., C.E.	5	1 0	540	36·7	30·77	..	..
D Derwent Vicarage	No. 67. S. B. Winser, Esq., C.E.	8	1 0	675	43·6	32·12	169	135
M Derwent (Lockerbrook Plant.)	68. S. B. Winser, Esq., C.E.	5	1 0	782	47·7	35·10	..	..
D Derwent Dam	No. 26. S. B. Winser, Esq., C.E.	8	1 0	790	42·8	34·85	182	137
M Hayfield (Ashop Head)	No. 43. S. B. Winser, Esq., C.E.	5	1 0	1650	..	37·40	..	..
M Derwent Dale (Shire Owlers)	No. 69A. S. B. Winser, Esq., C.E.	5	1 0	825	..	35·02	..	..
D Derwent Dale (Birchinlee)	No. 23. S. B. Winser, Esq., C.E.	8	1 0	870	50·3	38·45	178	138
M Westend Bridge	No. 66. S. B. Winser, Esq., C.E.	5	1 0	878	50·2	39·96	..	..
M Lady Clough Moor	No. 41A. S. B. Winser, Esq., C.E.	5	1 0	1720	50·3	37·80	..	..
M Coldharbour Moor (Summit)	39. S. B. Winser, Esq., C.E.	5	1 0	1670	..	36·20	..	..
D Derwent Dale (Howden Dam)	17. S. B. Winser, Esq., C.E.	8	1 0	829	47·7	36·49	179	138
M Derwent Dale (Ridge Farm)	13A. S. B. Winser, Esq., C.E.	8	1 0	875	52·4	37·88	..	..
M Alport Moor (Glethering Cl.)	40. S. B. Winser, Esq., C.E.	5	1 0	1640	..	38·45	..	..
M Alport Moor (Glethering Cl.)	40A. S. B. Winser, Esq., C.E.	5	1 0	1640	..	42·30	..	..
M Westend Moor (Blacklow Cote)	15. S. B. Winser, Esq., C.E.	5	1 0	970	51·3	38·45	..	..

† Previously called Wild Street.

DIVISION VII—NORTH MIDLAND COUNTIES—(*con.*).

	STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Aver-age Rain-fall.	1933. Rain-fall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
	DERBYSHIRE—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
	6.—TRENT—(*con.*).								
M	Westend Moor	No. 10. S. B. Winser, Esq., C.E.	5	1 0	1560	..	37·54	..	..
M	Alport Moor	No. 38A. S. B. Winser, Esq., C.E.	5	1 0	1790	54·4	38·00	..	..
M	Derwent Dale (Slippery Stones)	62. S. B. Winser, Esq., C.E.	5	1 0	908	49·4	39·77	..	..
M	Ridgewalk Moor	No. 9. S. B. Winser, Esq., C.E.	5	1 0	1650	..	38·36	..	..
M	Broadhead Clough	No. 63. S. B. Winser, Esq., C.E.	5	1 0	1005	52·8	39·28	..	..
	7.—TRENT—Erewash. 50 sq. mi.								
D	Long Eaton (The Hall)	H. Raven, Esq., C.E.	8	0 10	105	23·4	20·30	148	96
d	Ilkeston (New Stanton)	Stanton Ironworks Co., Ld.	5	1 6	150	25·2	22·12	..	104
d	Heanor (Sharplow)	J. R. Groom, Esq.	5	1 0	240	..	(25·08)	(141)	(116)
D	Codnor (Cross Hill)	A. F. Pine, Esq.	5	1 0	394	27·7	25·45	151	115
D	Codnor Park	L. M. & S. Rly. Co.	5	1 0	243	..	23·78	166	106
	8.—OUSE—Don. 148 sq. mi.								
D	Chesterfield (Walton San.)	Dr. A. Niven Robertson	5	1 0	450	29·5	21·96	137	100
D	Chesterfield (Linacre Res.)	Chesterfield Water Board	8	1 0	430	30·4	25·52	165	113
D	Chesterfield (Linacre Res.)	Chesterfield Water Board	5	1 0	475	29·7	25·06	165	113
d	Chesterfield (Sewage Works)	S. Thornhill, Esq.	5	1 0	223	24·9	(23·48)	..	..
D	Chesterfield (Crowhole Res.)	Gilbert Frith Esq., C.E.	8	1 3	610	..	24·63	142	110
D	Horsley Gate	Miss E. Wilson	5	1 0	650	..	28·82	143	118
D	Spinkhill (Mt. St. Mary's College)	Rev. L. Cardwell, S.J.	5	0 9	340	..	22·98	167	97

DIVISION VIII—NORTH-WESTERN COUNTIES.

CHESHIRE. (Area, 1,027 sq. mi.).

	1.—MERSEY, UPPER. 200 sq. mi.								
D	Langley (Twelve Ashes)	E. Hamson, Esq., C.E.	6	0 9	903	..	32·56	163	135
D	Langley (Trentabank Res.)	E. Hamson, Esq., C.E.	6	0 9	854	..	31·69	163	132
D	Langley (Bottoms Res.)	E. Hamson, Esq., C.E.	5	1 3	664	38·5	30·71	169	133
D	Macclesfield (Leadbeaters Res.)	E. Hamson, Esq., C.E.	5	1 0	608	33·1	26·13	159	121
D	MACCLESFIELD (West Park)	E. Hamson, Esq., C.E.	5	1 0	500	34·1	28·05	150	124
D	Rainow (The Clough)	Miss Anna Neave	5	1 3	815	34·4	28·47	176	126
D	Knutsford (Hazelfield)	H. P. Ashworth, Esq.	5	1 0	213	30·3	23·53	144	113
D	Alderley Edge (Elm Grove)	E. H. Morris, Esq.	5	1 0	300	..	24·20	140	112
D	Kettleshulme (Glebe House)	A. Y. Barker, Esq.	5	1 6	850	39·6	(33·33)	168	124
D	Whaley Bridge (Taxal Lo.)	Mrs. Ramsden-Jodrell	5	1 0	700	..	32·87	147	119
d	Whaley Bridge (Todds Brook)	Mr. F. Bowden	5	1 0	602	41·5	32·60	..	121
D	Disley (Lyme Park)	T. Dearden, Esq.	5	1 0	674	..	27·68	152	120
D	Disley (Lyme Park)	T. Dearden, Esq.	5	1 0	720	..	26·86	151	116
D	Runcorn (Weston Point)	Weaver Navigatn. Trustees.	8	1 4	17	31·3	21·03	138	101
D	Appleton Reservoir	Warrington W.W.	8	0 9	120	..	22·40	152	112
D	Moore (Uplands)	Lt.-Comm. G. K. Rylands, R.N.	5	1 0	120	..	20·81	147	101
d	High Lane (Lyme View)	S. Arrowsmith, Esq.	5	1 0	602	..	26·42	(170)	(124)
D	Thelwall (The Clough)	E. W. Reynolds, Esq.	5	1 0	95	31·4	21·62	141	109
D	Thelwall Lea	E. H. Rideout, Esq.	5	1 0	90	..	20·08	134	101
D	Altrincham (Norman's Pl.)	*new g.* Miss G. A. Griffiths	5	1 0	150	33·6	23·48	139	111
	Altrincham (Burlington Cott.)	Miss Laura Newton	8	2 6	103	31·4	23·10	..	..
	Cheadle (Adswood)	R. W. Wright, Esq.	5	1 0	186	..	24·88	..	..
D	Stockport (Isolation Hospital)	Medical Officer of Health	5	1 2	285	..	25·58	152	112
	Godley Reservoir, *old g*	Manchester Corpn. W.W.	5	2 0	500	31·8	26·48	..	..
	Godley Reservoir, *new g.*	Manchester Corpn. W.W.	5	1 0	488	..	27·48	..	..
D	Dukinfield (Higher Reservoir)	M. T. B. Whitson, Esq., C.E.	8	1 6	495	..	24·35	164	119
D	Dukinfield (Lower Reservoir)	M. T. B. Whitson, Esq., C.E.	5	1 0	435	33·0	25·58	164	120
	Arnfield Reservoir, *new g. old site.*	Manchester Corpn. W.W.	5	2 0	512	39·1	31·51	..	..
	Arnfield Reservoir, *new g.*	Manchester Corpn. W.W.	5	1 0	512	..	32·16	..	..
	Rhodes Wood Res., *new g, old site.*	Manchester Corpn. W.W.	5	1 6	545	..	36·99	..	..
M	Rhodes Wood Reservoir, *new g.*	Manchester Corpn. W.W.	5	1 0	545	..	37·01	..	..
	Torside Reservoir, *new g, old site.*	Manchester Corpn. W.W.	5	2 0	669	..	38·11	..	..
	Torside Reservoir, *new g.*	Manchester Corpn. W.W.	5	1 0	669	..	38·41	..	..
D	Stalybridge (Market Ground Yd.)	M. T. B. Whitson, Esq., C.E.	5	1 0	373	..	29·09	154	124
D	Stalybridge (Brushes Filter Ho.)	M. T. B. Whitson, Esq., C.E.	5	1 6	616	39·2	33·10	176	129
	Swineshaw Moor (Lees Hill)	M. T. B. Whitson, Esq., C.E.	5	1 0	1168	38·6	29·68	..	..
M	Woodhead Reservoir, *new g, old site.*	Manchester Corpn. W.W.	5	1 0	665	47·7	37·59	..	..
	Woodhead Reservoir, *new g.*	Manchester Corpn. W.W.	5	1 0	665	..	38·16	..	..

DIVISION VIII—NORTH-WESTERN COUNTIES—(*con.*).

STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
CHESHIRE—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
1.—MERSEY, UPPER—(*con.*).								
§Crowden (Span Gutter)	Manchester Corpn. W.W....	5	1 0	1530	45·0	43·65	..	..
M§Woodhead (Pikenaze)	Manchester Corpn. W.W....	5	1 0	907	..	38·21	..	..
§Ormes Moor	Manchester Corpn. W.W....	5	1 0	1356	41·4	38·11	..	..
Swineshaw Moor (Boar Flat)	Manchester Corpn. W.W....	5	1 0	1190	..	38·66	..	..
§Pikenaze Moor (Round Hill)	Manchester Corpn. W.W....	5	1 0	1514	..	45·72	..	..
Withens Moor (West Withens)	Manchester Corpn. W.W....	5	1 0	1382	..	47·60	..	..
Long Ridge Moss (Near Broadslate)	Manchester Corpn. W.W....	5	1 0	1663	..	49·77	..	..
§Heyden Moor (Britland Edge)	Manchester Corpn. W.W....	5	1 0	1540	..	44·86	..	..
Upper Heyden, *new g*	Manchester Corpn. W.W....	5	1 0	1708	..	47·47	..	..
§Grains Moss	Manchester Corpn. W.W....	5	1 0	1570	..	47·18	..	..
2.—MERSEY—Weaver. 489 sq. mi.								
d Wirswall Hall	F. H. Illingworth, Esq.....	5	1 0	500	..	19·08	..	103
D Nantwich (Baddiley W.W.)	Nantwich U.D.C.	5	1 0	231	28·3	20·94	135	113
D Nantwich (Dorfold Hall)	Weaver Navigatn. Trustees	8	1 0	190	28·8	20·69	168	108
D Nantwich (Reaseheath Hall)	Weaver Navigatn. Trustees.	8	1 0	130	29·1	19·87	142	98
D Crewe (Weston Lane)	L. M. & S. Rly.....	12	4 0	186	28·2	20·23	136	103
D Crewe (Isolation Hospital)	Leonard Reeves, Esq., C.E..	5	1 0	172	27·6	21·06	152	114
D Congleton (Buglawton Sch.) *new g.*	Weaver Navigation Trustees	8	1 0	347	..	25·83	178	124
D Congleton (Buglawton Vic.) *new g.*	Weaver Navigation Trustees	8	1 0	347	30·5	25·54	176	112
D Tarporley (Tirley Garth Gdns.)	Mr. J. B. Allan.....	5	3 6	450	30·0	18·87	169	109
D Middlewich	I.C.I. (Alkali) Ltd.....	5	1 0	138	..	18·36	141	104
d Middlewich (Bostock Hall), *new g.*	Cpt. W. H. France-Hayhurst	5	1 0	157	30·3	19·70	..	..
D Delamere (Linmere)	Forestry Commission	8	0 9	250	29·5	20·73	177	117
D Northwich (Sandiway, W.W.)	J. Birtwistle, Esq.....	8	1 0	163	..	20·29	151	106
D Northwich (Hunts Lock)	Weaver Navigation Trustees	8	1 0	47	30·0	19·26	169	104
D Northwich (Winnington)	I.C.I. (Alkali) Ltd.....	5	1 0	64	29·2	19·20	159	102
D Northwich (Barnton)	Giles Owen, Esq.....	5	1 0	175	30·3	18·44	160	107
D Northwich (Lostock Gralam)	I.C.I. (Alkali) Ltd.....	5	1 0	75	..	19·58	169	110
3.—MERSEY LOWER & C. 142 sq. mi.								
Tarporley (Willington Hall)	Major C. W. Tomkinson....	5	1 0	220	29·4	19·05	137	100
D Mouldsworth	A. J. Robinson, Esq.....	5	1 0	145	..	19·45	134	100
D Ince Hall	Mrs. Park-Yates.....	5	1 0	95	..	20·79	148	116
D Hooton Waterworks	A. J. Robinson, Esq.....	5	1 6	97	30·3	20·41	154	107
D Willaston	H. Procter, Esq.	5	1 0	100	..	19·03	146	104
D Eastham	H. B. Vernon, Esq.....	5	1 0	100	31·9	21·22	149	111
D Crosshill Reservoir, *old g*	R. F. Baker, Esq.....	5	1 0	237	..	22·46	160	106
D Crosshill Reservoir, *new g*	R. F. Baker, Esq.....	5	1 0	212	..	22·40	160	105
D Prenton Waterworks	A. J. Robinson, Esq.....	5	1 6	91	28·1	24·53	134	111
D Rock Ferry (High School)	L. Davies-Shiel, Esq.....	5	1 0	100	..	22·41	160	106
D Birkenhead (Oxton)	J. H. Howell, Esq.....	5	1 1	163	..	22·97	145	107
D Birkenhead (Bidston Obs'y.)(+A)	The Director	8	1 0	198	27·9	19·38	152	106
D Birkenhead (Bidston Obs'y.) *9h.*	The Director	8	1 0	198	..	19·99	156	105
D Hoylake (Recreation Gd.)	The Surveyor	5	1 0	23	28·1	20·08	146	112
D Wallasey (Harrison Park)	Medical Officer of Health ...	5	1 0	66	29·7	20·51	154	108
4.—DEE. 127 sq. mi.								
D Eaton Hall Gardens	Mr. N. F. Barnes	5	1 0	72	26·9	18·92	151	109
D Eccleston	E. Wells, Esq.....	5	1 1	94	26·8	18·47	152	107
d Rowton (Holly Bank)	J. H. Salmon, Esq.....	5	1 5	123	27·3	19·43	..	..
D Chester (Waterworks)	C. Wilfrid Bennett, Esq.....	5	0 10	85	26·4	17·21	144	93
Burton	R. A. L. Billson, Esq.....	5	1 0	210	..	18·06	..	..
D Neston (Vine House)	H. F. Russell, Esq.....	5	1 0	111	27·4	19·14	148	107
D Heswall (St. Fillan's)	Capt. J. Deedes.....	5	1 0	40	..	20·58	169	110
D Heswall (Greta)	Dr. T. Guthrie.....	5	1 0	230	..	20·44	161	108
d West Kirby (Caldy Manor)	Mr. E. L. Barker.....	5	6 0	131	27·9	20·06	..	..
West Kirby (Hilbre House)	Egerton Macdona, Esq.....	5	0 9	25	27·8	21·29	..	..
D West Kirby (Monk's Way)	Miss G. S. Kirkby.....	5	1 0	113	28·9	20·56	162	106
D West Kirby (St. Andrew's Vic.)	The Rev. E. F. Robson ...	5	1 0	25	27·9	20·30	147	108
D West Kirby (Deeside Nursery)	H. Ward, Esq.....	5	1 6	45	..	20·91	153	117
SOUTH LANCASHIRE. (Area, 687 sq. mi.).								
1.—ALT & C. 103 sq. mi.								
d Litherland (Hatton Hill Pk.)	G. W. Ponsford, Esq., C.E...	5	1 0	59	..	22·08	..	..

§ Gauge over-exposed on Moor.

DIVISION VIII—NORTH-WESTERN COUNTIES—(*con.*).

STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Aver-age Rain-fall.	1933. Rain-fall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
SOUTH LANCASHIRE—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
1.—ALT & C.—(*con*).								
d Ormskirk (Bickerstaffe P. Stn.)	C. Burton Ede, Esq., C.E...	5	1 2	128	33·2	23·61	(145)	(118)
d Ormskirk (Springfield P. Stn.)	C. Burton Ede, Esq., C.E...	5	0 11	70	33·1	22·37	(136)	(113)
D Formby (The Dunes)	J. Harold Coney Esq.	5	0 9	30	29·8	22·93	154	117
2—MERSEY, LOWER. 240 sq. mi.								
D Garston, *new g*	Liverpool Corporation	5	1 0	81	30·7	21·76	162	117
D Garston (Grassendale Park)	Miss E. C. Abraham	5	1 0	30	30·1	20·98	156	117
D Aigburth (Beech Lawn)	T. H. Edwards, Esq.	8	1 0	120	30·0	20·74	156	107
D Liverpool (Lark Lane)	Liverpool Corporation	5	10 8	90	..	21·23	152	108
D Liverpool (Smithdown Road)	Liverpool Corporation	5	1 0	135	31·7	21·96	158	120
D Liverpool (Monument Pl.) (+A)	Liverpool Corporation	5	1 3	124	..	22·18	157	109
D Liverpool (Rathbone Road)	Liverpool Corporation	5	1 0	198	34·3	23·80	160	123
D Liverpool (Breckside Park)	Liverpool Corporation	5	1 0	132	33·2	21·77	161	123
D Liverpool (Queens Drive)	Liverpool Corporation	5	1 0	119	33·3	23·23	167	123
D Warrington (Howley Yard)	A. M. Ker, Esq.	10	5 1	26	..	21·76	128	106
d Irlam (Sewage Works)	The Engineer	5	1 1	40	..	23·22	..	105
D Winwick P. Stn.	Warrington W.W.	8	0 9	115	..	22·76	144	114
D St. Helens (Eccleston Hill)	A. P. Statham, Esq., C.E.	12	1 0	265	33·6	22·20	168	115
D St. Helens (Victoria Park)	Dr. F. Hauxwell	8	1 5	160	33·9	23·58	172	116
d Earlestown (Newton Cemetery)	T. E. Clough, Esq.	5	1 0	75	33·6	(21·22)	..	..
D Leigh (Sewage Works) (+A)	D. Ledson, Esq.	5	1 0	67	32·6	23·20	164	114
3.—MERSEY,—Irwell. 299 sq. mi.								
d Stretford (Sewage Farm)	Stretford U.D.C.	5	1 1	65	..	(24·12)	(155)	(119)
D Stretford (Longford Yard)	Stretford U.D.C.	8	1 1	87	..	24·62	157	115
D Manchester (Hullard Park)	Stretford U.D.C.	8	1 1	100	32·4	24·69	130	118
D Manchester (Old Trafford)	Stretford U.D.C.	8	1 1	107	..	25·12	151	123
D Urmston (Sew. Wks., Davyhulme)	Manchester Cor., Rivers Dpt.	8	1 0	72	30·9	23·40	137	112
D Patricroft (Eccles Sewage Wks.)	C. J. Girling, Esq.	5	1 0	72	30·3	22·98	151	109
d Manchester (Godlee Obs'y.)	The Curator	8	1 3	130	..	24·08	..	..
D MANCHESTER (OLDHAM ROAD)	Medical Officer of Health	5	1 0	191	34·3	25·21	153	115
D MANCHESTER (WHITWORTH PARK)	Manchester University	8	1 5	125	31·7	25·47	147	115
D Ashton-und.-Lyne (Knott H. Res.)	M. T. B. Whitson, Esq., C.E.	6	1 0	605	35·5	28·61	186	132
D Prestwich Sewage Works	H. T. Ainsworth, Esq., C.E..	8	0 10	150	36·6	27·01	154	118
Prestwich Reservoir, *new g, old site.*	Manchester Corpn. W.W.	5	2 0	357	*34·9*	25·83	..	..
Prestwich Res., *new g, new site.*	Manchester Corpn. W.W.	5	1 0	357	..	28·56	..	..
D Prestwich (Heaton Park)	Manchester Corporation	8	1 0	312	36·8	28·39	173	122
Prestwich (Heaton Park Res.)	Manchester Corpn. W.W.	5	1 0	355	37·1	27·09	..	..
D Oldham Gas Works	Ernest Parry, Esq., C.E.	5	5 0	602	39·0	33·18	178	140
D Oldham (Brushes Clough) No. 3	C. J. Batley, Esq., C.E.	5	1 0	921	46·7	35·64	168	131
D Royton (Public Park)	The Engineer and Surveyor.	5	1 0	502	..	31·96	180	132
D BOLTON (Queen's Park) (+A)	The Corpn. (T. Midgley)	5	1 0	352	43·1	31·80	168	129
d Bolton (L.M.S.R.) No. 1	L. M. & S. Rly.	5	1 0	299	..	31·35	..	..
D Bolton (Heaton Reservoir)	Bolton Corporation W.W.	5	1 0	500	43·5	30·80	175	135
Bolton W.W. (Harpers Farm)	Bolton Corporation W.W.	5	1 0	872	..	32·68	..	..
D Bolton (Bloomfield, Heaton)	Mrs. F. Taylor, J.P.	5	1 0	530	43·1	32·21	183	133
D Bolton (Smithills Hall)	Nigel V. Ainsworth, Esq.	8	1 2	510	46·1	34·88	162	133
D Bury (L.M.S.R.) No. 5	L. M. & S. Rly.	5	1 0	294	..	30·40	213	143
D Bury (Parsons Lane)	Bury Water Board.	8	9 8	316	42·4	30·20	164	122
D Bury (Bridge Hall)	Miss C. Wrigley	8	1 6	..	42·2	30·82	170	129
D Bradshaw (Sewage Works)	Turton U.D.C.	5	1 0	329	43·0	31·61	155	138
D New Hey (Sewage Works)	Mr. J. B. Ogden	5	1 0	514	41·6	32·98	151	135
d Milnrow (Butterworth Hall)	C. J. Batley, Esq., C.E.	5	1 0	512	43·8	34·39	(168)	(125)
D Milnrow (Piethorne, Kitcliffe)	C. J. Batley, Esq., C.E.	5	1 0	766	..	35·53	180	136
D Milnrow (Piethorne, Coldgreave)	C. J. Batley, Esq., C.E.	5	1 0	832	46·3	37·14	180	137
D Rochdale (Roch Mills Sew. Wks.)	S. H. Morgan, Esq., C.E.	8	1 1	363	44·5	29·84	175	126
D Rochdale (Broadfield Pk. Obsy.)	Medical Officer of Health	8	1 0	472	43·9	28·26	177	131
D Rochdale (Fieldhead Yard)	S. H. Morgan, Esq., C.E.	8	1 0	473	44·8	30·01	167	125
D Rochdale (Ashworth Moor Res.)	Heywood Water Board	5	1 2	956	..	30·26	164	132
Bolton (Egerton House) *old g*	E. H. Ashworth, Esq.	5	1 0	633	49·6	33·89	..	..
Bolton (Egerton House) *new g*	E. H. Ashworth, Esq.	5	1 0	633	48·8	34·22	..	..
D Bury (Gin Hall) No. 1	Bury Water Board	8	1 0	475	43·7	30·56	184	134
D Bury (Gin Hall) No. 2	Bury Water Board	8	1 0	475	44·5	31·56	184	135
D Bolton W.W. (Springs) No. 2	Bolton Corporation W.W.	5	1 0	810	54·5	39·35	185	134
Bolton W.W. (Eagley) No. 4	Bolton Corporation W.W.	5	1 0	546	52·3	38·35	..	..
M Bolton W.W. (Hordern)	Bolton Corporation W.W.	5	1 0	1160	53·6	39·12	..	..

DIVISION VIII—NORTH-WESTERN COUNTIES—(*con.*).

STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
SOUTH LANCASHIRE—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
3.—MERSEY—Irwell.—(*con.*).								
§Bolton W.W. (Delph)	Bolton Corporation W.W...	5	1 0	710	51·2	37·95	..	..
M Bolton W.W. (Longworth)	Bolton Corporation W.W...	5	1 0	770	52·4	37·67	..	..
Bolton W.W. (Wayoh)....No. 3.	Bolton Corporation W.W...	5	1 0	608	51·6	36·46	..	..
§Bolton W.W. (Holden's Farm)....	Bolton Corporation W.W...	5	1 0	955	52·1	38·69	..	..
Bolton W.W. (Top-o'-th'-Brow)...	Bolton Corporation W.W...	5	1 0	935	55·2	40·34	..	..
D Bolton W.W. (Entwistle)...No. 2.	Bolton Corporation W.W...	5	1 0	692	53·2	37·97	201	135
Bolton W.W. (Bromiley Heys)....	Bolton Corporation W.W...	5	1 0	925	51·5	41·34	..	..
§Bolton W.W. (Hulton Pasture)....	Bolton Corporation W.W...	5	1 0	1130	49·7	37·62	..	..
§Bolton W.W. (Moorside).....	Bolton Corporation W.W...	5	1 0	850	50·2	36·56	..	..
Bolton W.W. (Clough).....No. 2.	Bolton Corporation W.W...	5	1 0	1025	55·0	41·17	..	..
Bolton W.W. (Cranberry Moss)..2.	Bolton Corporation W.W...	5	1 0	982	53·0	38·61	..	..
M Bolton W.W. (Slater Lane).....	Bolton Corporation W.W...	5	1 0	985	51·8	37·20	..	..
Bolton W.W. (Brown Lowe).....	Bolton Corporation W.W...	5	1 0	1200	51·8	39·67	..	..
Bolton W.W. (Longshoot).....	Bolton Corporation W.W...	5	1 0	930	..	39·28	..	..
Bolton W.W. (Uglow).....No. 2.	Bolton Corporation W.W...	5	1 0	1090	51·1	36·28	..	..
D Rochdale (Hamer Pasture Res.)...	Rochdale Corporation W.W.	5	1 0	760	48·6	32·44	169	130
D Rochdale (Naden Filters).....	Heywood Water Board.....	5	1 0	761	..	32·67	157	125
M Norden (Higher Red Lumb).....	Heywood Water Board.....	5	1 3	1125	..	31·78	..	..
W Norden (Far Knowl Farm).....	Heywood Water Board.....	5	0 10	..	47·2	33·21	..	..
W Rochdale (Naden Dean) *old g*.....	Heywood Water Board.....	5	1 4	948	..	27·52	..	..
W Rochdale (Naden Dean) *new g*.....	Heywood Water Board.....	5	1 4	948	..	29·12	..	..
D Littleborough (Longden End).....	C. J. Batley, Esq., C.E.....	5	1 0	751	47·4	38·13	190	136
D Littleborough (Hollngwrth Lke)...	C. J. Batley, Esq., C.E.....	8	1 0	610	40·6	30·95	166	128
d Littleborough (Broadhead).....	C. J. Batley, Esq., C.E.....	8	1 0	1337	..	30·34	..	..
d Littleborough (Blckstne. Edge)....	C. J. Batley, Esq., C.E.....	8	1 0	1268	45·0	32·33	(184)	(136)
D Littleborough (Uppr. Chlburn.)....	C. J. Batley, Esq., C.E.....	8	1 0	725	47·5	35·46	184	136
D Littleborough (Chelburn).....	C. J. Batley, Esq., C.E.....	8	1 0	700	..	30·55	184	132
M Ramsbottom (Killgate Brook).....	Heywood Water Board.....	5	1 0	978	..	34·07	..	..
d Ramsbottom (L.M.S.R.)....No. 3.	L. M. & S. Rly.....	5	0 11	418	47·7	34·43	..	..
M Ramsbottom (Cheesden Barn).....	Heywood Water Board.....	5	1 0	997	..	32·56	..	..
D Edenfield (Scout Moor Res.) No. 1.	Bury Water Board.....	8	1 0	1275	..	41·02	185	140
D Edenfield (Scout Moor Res.) No. 2.	Bury Water Board.....	8	1 0	1275	..	41·88	185	139
D Waterfoot (Cragg Reservoir).....	F. W. Mozley, Esq., C.E....	5	1 0	1325	..	34·50	199	135
D†Waterfoot (Cowpe Reservoir).....	F. W. Mozley, Esq., C.E....	5	1 0	1013	..	34·21	199	135
D Rochdale (Spring Mill Whitworth).	Rochdale Corporation W.W.	5	1 0	720	51·5	34·98	162	136
D Wardle (Watergrove Mill).....	Rochdale Corporation W.W.	5	1 0	775	..	38·15	168	138
D Rochdale (Cowm, Whitworth).....	Rochdale Corporation W.W.	5	1 0	762	51·5	39·13	164	149
D Helmshore (Clough House).....	A. C. Cullen, Esq.....	5	1 0	650	50·3	38·67	152	132
D Haslingden (Holden Wood) No. 1.	Bury Water Board.....	8	1 0	670	52·1	39·75	166	139
D Haslingden (Holden Wood) No. 2.	Bury Water Board.....	8	1 0	670	51·4	37·79	166	137
D Haslingden (Calf Hey).....No. 1.	Bury Water Board.....	8	1 0	800	50·9	38·47	163	139
D Haslingden (Calf Hey).....No. 2.	Bury Water Board.....	8	1 0	800	..	34·82	165	137
D†Bacup (Sheephouse Reservoir) ...	F. W. Mozley, Esq., C.E. ..	5	1 0	1008	..	31·76	184	132
d Rawtenstall Cemetery	J. Johnson, Esq.....	8	1 1	572	49·1	36·90	..	133
D Haslingden (L.M.S.R.).....No. 2.	L. M. & S. Rly.....	5	1 0	715	..	37·20	164	129
D Rawtenstall (Cloughbottom) No. 1.	Bury Water Board.....	8	1 0	1025	46·7	38·67	177	156
D Rawtenstall (Cloughbottom) No. 2.	Bury Water Board.....	8	1 0	1025	..	37·76	177	145
D Rawtenstall (Hapton Res.)..No. 1.	Bury Water Board.....	8	1 0	930	48·7	39·19	173	152
D Rawtenstall (Hapton Res.)..No. 2.	Bury Water Board.....	8	1 0	930	50·6	42·22	173	152
4.—MERSEY, UPPER. 45 sq. mi.								
D Didsbury (Linden Road).....	L. G. King, Esq.....	8	1 6	110	31·0	25·41	146	115
d West Didsbury (Town Hall)..(R)..	Manchester Corporation....	8	7 6	121	29·2	23·04	..	103
D Northenden Sewage Wks.	Manchester Cor., Rivers Dpt.	8	1 0	81	..	23·14	145	110
D Chorlton-cum-Hardy Sew. Works..	Manchester Cor., Rivers Dpt.	8	1 0	95	30·5	23·82	145	111
D Fallowfield (Platt Field Park).....	Manchester Corporation....	8	1 0	124	30·6	25·48	148	118
Denton Reservoir, *old g*.....	Manchester Corpn. W.W....	5	2 0	306	30·5	21·63	..	..
Denton Reservoir, *new g*.....	Manchester Corpn. W.W....	5	1 0	306	..	25·29	..	..
Gorton Reservoir, *old g*.....	Manchester Corpn. W.W....	5	2 0	263	30·5	23·72	..	..
Gorton Reservoir, *new g*.....	Manchester Corpn. W.W....	5	1 0	263	..	25·83	..	..
D Ashton-u-Lyne (Henrietta St. Yd.).	M. T. B. Whitson, Esq., C.E.	7	1 0	394	37·2	27·95	167	123
D Lower Swineshaw Reservoir.....	M. T. B. Whitson, Esq., C.E.	8	1 6	886	43·6	34·11	170	135
Swineshaw Moor.....	M. T. B. Whitson, Esq., C.E.	5	1 0	1340	44·9	36·25	..	..
D Mossley (Manor House Yard).....	M. T. B. Whitson, Esq., C.E.	5	1 0	636	41·5	28·33	160	131

†Gauge over-exposed on Moor. § Turf wall round gauge.

DIVISION VIII—NORTH-WESTERN COUNTIES—(*con.*).

	STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Rain-gauge: Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
	CENTRAL LANCASHIRE. (Area, 536 sq. mi.)		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
	1.—RIBBLE & C. 326 sq. mi.								
	Darwen (Spring Bank)	T. Anderton, Esq.	5	1 0	710	..	40·50	..	..
D	Darwen (Sunnyhurst Hey Res.)	E. Marsden, Esq., C.E.	8	1 0	915	49·5	36·25	175	131
D	Darwen (Earnsdale Reservoir)	E. Marsden, Esq., C.E.	8	1 0	705	47·4	38·15	176	137
D	Darwen (Bold Venture Park)	Medical Officer of Health	8	1 1	724	50·1	39·21	189	135
D	Darwen (Hoddlesden) No. 1.	W. Pickstone, Esq., C.E	8	1 6	680	49·1	36·25	159	132
D	Darwen (Daisy Green) No. 1.	W. Pickstone, Esq., C.E.	8	1 6	699	46·6	33·55?	159	128
D	Darwen (Pickup Bank) No. 1.	W. Pickstone, Esq., C.E.	8	1 6	720	46·8	31·14?	160	127
	Withnell No. 2	L. C. King-Wilkinson, Esq.	5	1 3	535	..	32·30	..	..
D	Brindle (Whiteholme)	Mrs. Victor H. Gatty	5	1 0	315	39·3	29·22	152	129
D	Haslingden (Mitchell's Ho. Res.)	A. J. Harrison, Esq.	5	1 6	950	..	34·79	176	143
D	Haslingden (Mitchell's Ho. Res.) No. 2.	A. J. Harrison, Esq.	5	1 6	984	..	32·09	173	142
D	Blackburn (Guide Reservoir)	W. Pickstone, Esq., C.E.	8	1 6	610	44·9	30·34	158	124
D	Blackburn (Witton)	W. Pickstone, Esq., C.E.	8	1 6	315	42·0	27·60	156	118
D	HUTTON (Lancs. C.C. Hort. Stat.)	The Director of Education	5	1 0	82	..	26·46	158	118
D	St. Anne's-on-Sea (South Side)	Dr. J. P. Litt	5	1 0	25	31·4	24·83	145	110
D	Preston (Moor Park) (+A)	Preston Corporation	8	1 0	110	35·3	28·89	172	126
D	Samlesbury Sewage Works	W. Pickstone, Esq., C.E.	8	1 6	240	36·9	28·84	161	121
w	Causeway Side (Burnley W.W.)	J. Shepherd, Esq.	8	1 0	1116	41·7	32·08	..	..
w	Sheddin (Burnley W.W.)	J. Shepherd, Esq.	8	1 0	960	41·9	32·00	..	..
D	Cant Clough S. Side (Burnley W.W.)	J. Shepherd, Esq.	8	1 0	900	42·3	31·20	181	133
D	Cant Clough N. Side (Burnley W.W.)	J. Shepherd, Esq.	8	1 0	900	41·5	31·32	182	134
D	Huncoat (Burnley Road Res.)	A. J. Harrison, Esq.	9	1 6	620	43·0	31·37	165	121
D	Huncoat (Burnley Rd. Res.) *new g.*	A. J. Harrison, Esq.	5	1 0	624	..	29·43	165	126
D	Wilpshire (Brooklyn Road)	H. W. Apperley, Esq.	5	1 0	408	40·7	31·71	165	125
D	Great Harwood (Parsonage Res.)	W. Pickstone, Esq., C.E.	8	1 0	631	40·7	32·24	175	131
D	Great Harwood (Dean Clough)	A. J. Harrison, Esq.	12	1 6	540	45·6	34·74	172	140
D	BURNLEY (Queen's Park)	Medical Officer of Health	8	1 0	458	..	33·53	172	133
D	Burnley (Swinden) *Upper g.*	J. Shepherd, Esq.	8	12 0	820	43·6	33·54	187	136
D	Burnley (Swinden) *Lower g.*	J. Shepherd, Esq.	8	1 0	745	44·3	33·95	190	139
D	Padiham (Altham Sew. Works) (+A)	H. Russell, Esq., C.E.	5	1 0	225	40·9	27·15	159	120
d	Padiham (Gawthorpe Hall)	Lord Shuttleworth	8	1 0	282	40·7	28·60	..	122
D	Padiham (Huntroyde)	E. G. Howsin, Esq.	5	1 0	423	41·1	30·73	162	133
d	Grimsargh (Red Scar)	Mrs. K. C. Hollas	5	0 8	175	..	(32·03)	(137)	(116)
D	Alston Reservoir	E. C. Oakes, Esq., C.E.	8	1 2	320	41·0	29·47	172	133
d	Nelson (Coldwell Res.) S. No. 2.	Nelson Corporation W.W.	5	1 0	960	46·3	37·91	..	154
D	Nelson (Victoria Park)	Nelson Corporation W.W.	5	1 0	375	41·8	29·38	160	125
D	STONYHURST (College) (+A)	The Director	8	1 10	377	46·5	32·72	168	129
D	Cowley Brook (Preston W.W.)	E. C. Oakes, Esq., C.E.	8	1 2	616	..	35·17	176	132
D	Spade Mill (Preston W.W.)	E. C. Oakes, Esq., C.E.	8	1 2	400	41·7	28·86	177	129
M	Jeffery Hill (Preston W. W.)	E. C. Oakes, Esq., C.E.	8	1 2	900	47·3	37·46	..	..
D	Sabden (Whins House)	Miss Foster	5	1 0	500	41·1	30·86	166	138
D	Sabden (Churn Clough Res.)	H. Russell, Esq., C.E.	5	1 0	790	41·2	33·25	192	129
w	Sabden (Craggs Dole)	H. Russell, Esq., C.E.	8	1 0	1050	46·0	31·77	..	..
w	Newchurch (Cock Dole)	H. Russell, Esq., C.E.	5	1 0	1090	47·0	32·32	..	..
D	Barley (Ogden Reservoir)	Nelson Corporation W.W.	5	1 6	950	46·0	32·22	177	133
D	Pendle Hill (Buttock)	Nelson Corporation W.W.	5	1 0	1175	..	36·98	176	140
D	Colne (Swinden Sew. Works)	T. H. Hartley, Esq.	5	1 0	423	42·0	31·02	180	138
	Barrowford Reservoir	Leeds & Liverpool Canal Co.	8	1 0	473	41·0	30·69	..	..
	Foulridge (Upper Reservoir)	Leeds & Liverpool Canal Co.	8	1 0	582	40·5	27·58	..	..
	Foulridge (Reedy Moor)	Leeds & Liverpool Canal Co.	5	1 0	553	..	27·50?	..	..
	Clitheroe (Moorland Crescent)	C. W. Wheeler, Esq.	5	1 0	280	..	29·94	..	..
D	Chatburn School	E. P. Aldersley, Esq.	5	0 11	322	43·0	32·18	173	134
	Clitheroe (Downham Hall)	R. C. Assheton, Esq.	10	1 6	464	..	28·44	..	..
	2.—RIBBLE—Douglas. 156 sq. mi.								
D	Wigan W.W. (Billinge Higher End)	The Borough Engineer	5	1 0	374	33·9	25·16	153	120
D	Orrell (Upholland Gram. Sch.)	The Headmaster	5	1 0	320	35·5	24·02	168	129

DIVISION VIII—NORTH-WESTERN COUNTIES—(*con.*).

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CENTRAL LANCASHIRE—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
2.—RIBBLE—Douglas—(*con.*).								
D Wigan W.W. (Worthington)	The Borough Engineer	5	1 0	225	35·4	26·58	158	118
D Horwich (Lower Rivington)	Col. J. R. Davidson, C.E.	5	1 0	440	38·7	27·46	172	127
w Horwich (Lower Knoll)	Col. J. R. Davidson, C.E.	8	1 4	742	41·2	28·26	..	..
w§Rivington (Brown Hill)	Col. J. R. Davidson, C.E.	8	1 4	844	..	32·17	..	..
w Rivington (Brown Hill) *new g*	Col. J. R. Davidson, C.E.	5	1 0	727	..	32·26	..	..
D Rivington (Stoneshouse)..No. 1	Col. J. R. Davidson, C.E.	10	1 4	629	..	30·84	180	129
D Rivington (Stonehouse) No. 2, *new g*	Col. J. R. Davidson, C.E.	5	1 0	607	..	30·74	191	129
w Rivington (Stoneshouse)..No. 3	Col. J. R. Davidson, C.E.	8	1 4	629	..	29·48	..	..
w§Rivington (Hurst Hill)	Col. J. R. Davidson, C.E.	8	1 10	1029	..	36·92	..	..
w§Rivington (Great Hill)	Col. J. R. Davidson, C.E.	8	1 8	1240	..	37·18	..	..
w§Rivington (Coppice Stile)	Col. J. R. Davidson, C.E.	8	1 8	879	..	32·63	..	..
w Rivington (Gamekeeper's)	Col. J. R. Davidson, C.E.	8	1 1	850	45·4	33·87	..	..
w Roddlesworth	Col. J. R. Davidson, C.E.	5	1 0	725	..	33·35	..	..
D Chorley (Com. Bk. Sew. Wks.)	J. Slater, Esq.	5	1 0	179	..	26·55	166	127
D LEYLAND (Worden Hall) ..(+A)	H. Nowell ffarington, Esq.	5	1 0	125	34·9	30·10	166	125
w§Darwen (Higher Hill)	Col. J. R. Davidson, C.E.	8	1 4	733	..	29·39	..	..
D Bamber Bridge (Cuerden Hall)	J. Alleyne Robinson, Esq.	5	1 0	230	35·7	27·41	148	120
3.—COAST STREAMS. 52 sq. mi.								
D Birkdale (Bedford Rd. Park)	The Corpn. (J. Baxendell)	5	1 0	35	..	22·57	153	118
D SOUTHPORT (Hesketh Park) (+A)	The Corpn. (J. Baxendell)	8	1 0	37	32·0	22·57	153	118
4.—OUSE—Aire. 2 sq. mi.								
d§ Watersheddles Reservoir	A. Atkinson, Esq., C.E.	5	1 0	1115	48·4	36·98	(188)	(141)
D Watersheddles Res. No. 2	A. Atkinson, Esq., C.E.	5	1 0	1115	..	38·77	188	142
Foulridge (Canal Office)	Leeds & Liverpool Canal Co.	8	1 0	497	43·5	27·86	..	..
NORTH LANCASHIRE. (Area, 609 sq. mi.)								
1.—DUDDON & C. 77 sq. mi.								
D Barrow-in-Furness (Sewage Wks.)	W. C. Persey, Esq., C.E.	5	1 0	20	39·3	29·42	183	121
D Barrow-in-Furness (Risedale C. Sch.)	The Headmaster	5	1 0	55	..	28·32	151	119
Little Urswick (North View)	J. Dobson, Esq.	5	1 6	130	44·4	41·36	187	139
D Ulverston (Poaka Beck)	Claude Diamond, Esq.	11	1 6	512	52·1	42·38	178	149
D Ulpha	Claude Diamond, Esq.	11	1 6	251	..	49·36	192	152
d Duddon Valley (Seathwaite Sch.)	The Headmistress	5	1 0	348	77·8	(62·15)	..	..
w Duddon Val. (Seathwaite Tarn)	Claude Diamond, Esq.	11	1 6	1221	92·7	72·14	..	..
2.—LEVEN & C. 135 sq. mi.								
D Cartmel (Holker Hall)	Lord Richard Cavendish	5	0 9	85	44·5	35·94	178	135
D Ulverston (Pengwerne)	C. J. Chapman, Esq.	5	1 4	138	50·1	40·11	172	140
Rusland Hall	C. F. Archibald, Esq.	5	1 0	25	46·7	44·30	182	143
Cartmell Fell (Ghyll Head Res.)	J. Lupton, Esq.	8	1 0	425	63·1	45·47	..	..
d Coniston (School Garden)	The Headmaster	5	1 0	180	80·3	66·00	..	132
D Hawkshead (Low House, Sawrey)	Mrs. W. H. Baines	5	1 0	342	65·3	48·31	171	165
Hawkshead (Foundation Sch.)	The Headmaster	5	1 0	214	71·1	53·03	..	..
d Hawkshead (Bettyfold)	H. T. Gnosspelius, Esq.	5	1 0	500	78·0	61·33	..	..
D Hawkshead Hill	Miss R. E. Sugden	5	0 7	600	..	59·26	163	152
D Ambleside (Skelwith Fold)	Miss C. Marshall	5	1 0	333	81·0	56·34	154	140
3.—KENT & C. 45 sq. mi.								
d Heysham Harbour	L. M. & S. Rly Co.	5	1 6	25	34·7	26·68	..	..
D MORECAMBE	The Town Clerk	8	1 0	23	37·0	31·75	155	117
D Hest Bank (Greendale)	W. Watson, Esq.	5	1 6	97	..	30·91	147	112
D Yealand Conyers (Beechfield)	Miss E. Roper	5	1 0	250	..	28·75	164	118
D Yealand Conyers (Morecambe Lo.)	J. Rawlinson Ford, Esq.	5	1 0	278	42·9	34·96	197	136
Grange-over-Sands (Nutwood)	J. Steen, Esq.	5	1 0	140	45·0	34·89	..	..
D Lindale (Ellerhow)	Lady Tomlinson	5	1 5	300	51·4	38·75	163	133

§ Gauge over-exposed on Moor.

DIVISION VIII—NORTH-WESTERN COUNTIES—(*con.*).

STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
NORTH LANCASHIRE—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
4.—LUNE. 135 sq. mi.								
D Hampson-in-Ellel	John Welch, Esq.	5	1 0	145	38·3	28·85	150	121
Bowland Forest (High Salter)	J. T. Sanderson, Esq.	5	1 0	974	..	42·36	..	..
Bowland Forest (Whitray)	J. T. Sanderson, Esq.	5	1 0	1139	57·5	45·27	..	..
Bowland Forest (Lower Salter)	J. T. Sanderson, Esq.	5	1 0	572	52·8	42·38	..	..
D Lancaster (The Friends School)	G. A. Watson, Esq.	5	1 0	55	36·2	29·13	155	122
D Lancaster (Blea Tarn Res.)	F. Hill, Esq., C.E.	8	1 0	410	..	30·30	160	120
D LANCASTER (Greg Obsy.) (+A)	The Corpn. (N. Holden, F.R.A.S.)	8	1 0	312	40·7	32·78	158	127
D **Lancaster (Lune Aqueduct)**	L. M. & S. Railway Co.	8	3 7	74	38·4	30·71	147	128
D Caton (Escowbeck House)	J. Howorth Massey, Esq.	5	1 0	150	..	33·15	168	126
D Wray (Wray House)	Baldwin Bent, Esq,. C.E.	5	1 6	170	..	31·80	168	129
D Wennington (Tatham Rectory)	Rev. A. S. Roberts	5	1 3	150	40·9	31·76	158	124
5.—WYRE & C. 213 sq. mi.								
D Weeton Reservoir (No. 1)	Fylde Water Board	5	1 0	133	36·6	30·44	153	129
D BLACKPOOL (Met. Observatory)	Medical Officer of Health	5	1 0	67	33·4	26·15	169	112
D Barton (Newsham House)	W. B. S. Smith, Esq.	5	1 0	104	38·2	30·20	168	128
D Kirkham (Elswick Lodge)	L. G. King, Esq.	5	1 4	52	35·0	28·20	146	113
D St. Michael's-on-Wyre	Ven. Archdeacon Hornby	5	1 0	26	36·0	28·96	152	118
D Fleetwood	Engineer and Surveyor	8	2 6	27	33·4	26·35	153	112
D Garstang (Barnacre Reservoir)	Fylde Water Board	5	1 0	616	45·7	35·01	166	129
D Garstang (Grizedale Reservoir)	Fylde Water Board	5	1 0	517	43·6	33·40	166	131
Garstang (Calder Intake)	Fylde Water Board	5	1 0	632	46·6	35·34	..	..
Garstang (Grizedale Intake)	Fylde Water Board	5	1 0	644	46·6	35·49	..	..
D Wyresdale (Abbeystead Res.)	F. Hill, Esq., C.E.	8	1 0	366	47·9	39·76	186	149
D Abbeystead Gardens	Mr. Geo. Penk	5	1 0	420	50·1	41·15	183	151
M Quernmore (Old Gauge Basin)	F. Hill, Esq., C.E.	8	1 0	963	46·1	41·18	..	..
M Wyresdale (Wardstone)	F. Hill, Esq., C.E.	8	1 0	1440	..	50·90	..	..
6.—INSULAR. 4 sq. mi.								

DIVISION IX—YORKSHIRE.

WEST RIDING. (Area, 2,791 sq. mi.)

1.—LUNE. 178 sq. mi.								
D Austwick (Beck House)	Rev. J. Turner	5	1 1	475	44·3	32·80	182	135
d Clapham (Newby)	G. Allinson, Esq.	5	0 8	550	..	34·05	..	..
d High Bentham (Inglefield)	Geoffrey Holmes, Esq.	5	1 0	412	..	(30·89)	(163)	(132)
D Sedbergh (Brigflatts)	The Misses Wilson	5	1 0	305	53·0	38·83	167	129
D Sedbergh (The Leyes)	Rev. A. J. K. Martyn	5	0 9	400	..	40·00	165	128
D Sedbergh (Havera Bank)	A. Mountain, Esq.	5	1 0	450	56·1	37·28	166	128
2.—RIBBLE. 225 sq. mi.								
D Barnoldswick (Rainhall Road)	Asa Burniston, Esq.	5	1 2	549	38·1	28·85	172	128
Barnoldswick (Greenberfield L.)	Leeds & L'pool Canal Co.	8	1 0	488	41·5	27·54	..	..
D Slaidburn (Hareden Valley)	E. C. Oakes, Esq., C.E.	8	1 2	556	68·3	49·37	189	136
D Slaidburn (Langden Brook)	E. C. Oakes, Esq., C.E.	8	1 2	556	68·6	51·95	193	144
D Slaidburn (Dunsop Houses)	W. Pickstone, Esq., C.E.	8	1 6	450	62·9	45·89	163	142
D Slaidburn (Footholme)	W. Pickstone, Esq., C.E.	8	1 6	565	62·2	46·63	158	141
M Slaidburn (Middle Knoll)	W. Pickstone, Esq., C.E.	5	1 0	1288	67·5	48·06	..	..
D Slaidburn (Brennand)	W. Pickstone, Esq., C.E.	8	1 6	820	68·3	47·91	156	141
D Slaidburn (Croasdale House)	W. Pickstone, Esq., C.E.	8	1 6	600	51·0	37·38	151	130
D Slaidburn (Whitendale)	W. Pickstone, Esq., C.E.	8	1 6	830	70·0	53·80	156	141
M Slaidburn (Cabin Hill)	W. Pickstone, Esq., C.E.	5	1 0	1559	63·0	(51·45)	..	..
M Slaidburn (Baxton Fell)	W. Pickstone, Esq., C.E.	5	1 0	1525	75·8	61·10	..	..
M Slaidburn (Saddle Hill)	W. Pickstone, Esq., C.E.	5	2 6	1475	..	(39·00)	..	..
D **Settle (Cappleside)**	Mrs. Geldard	5	0 10	500	49·9	35·97	179	139
D **Settle (Gas Works)**	J. W. Shepherd, Esq.	8	1 0	450	43·9	32·79	169	132
D Settle (GIGGLESWICK School)	The Headmaster	S	1 0	575	..	30·46	159	126
Horton-in-Ribblesdale	Nathaniel Hunt, Esq.	5	1 0	800	52·2	43·09	..	..
3.—MERSEY—Irwell. 2 sq. mi.								
4.—MERSEY, UPPER. 35 sq. mi.								
Greenfield (Upperwood Moor)	M. T. B. Whitson, Esq., C.E.	5	1 0	1518	..	37·28	..	..
D Greenfield (Chew Mount)	M. T. B. Whitson, Esq., C.E.	5	1 0	1578	50·7	38·03	191	141
Greenfield (Chew Reservoir)	M. T. B. Whitson, Esq., C.E.	5	1 0	1648	..	40·23	..	..

§ Gauge over-exposed.

DIVISION IX—YORKSHIRE—(*con.*).

	STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
	WEST RIDING—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
	4.—MERSEY, UPPER—(*con.*).								
D	Greenfield (Yeoman Hey)	M. T. B. Whitson, Esq., C.E.	5	1 0	759	49·1	36·67	154	136
	Greenfield (Ashway Moss)	M. T. B. Whitson, Esq., C.E.	5	1 0	1581	..	35·65	..	..
	Greenfield (Birchen Clough)	M. T. B. Whitson, Esq., C.E.	5	1 0	1018	51·4	39·32	..	..
	Saddleworth Station	L. M. & S. Rly.	5	4 10	630	..	32·00	..	..
D	Oldham (Strinesdale) *new*	C. J. Batley, Esq., C.E.	5	1 0	791	44·7	33·13	165	121
D	Standedge (Cas Shaw Broadh'd) *new*	C. J. Batley, Esq., C.E.	8	1 0	957	51·5	42·29	197	155
M	Standedge (Redbrook Res.)	L. M. & S. Rly.	8	2 0	1150	..	37·69	..	..
D	Denshaw C.E. School	The Head Teacher	8	1 1	870	..	37·63	180	138
D	Denshaw (Ox Hey) *new*	C. J. Batley, Esq., C.E.	8	1 0	1031	48·9	37·82	187	139
D	Denshaw (Crawshaw Hey)	C. J. Batley, Esq., C.E.	8	1 0	956	48·5	38·67	187	141
D	Denshaw (New Year's Br.) *new*	C. J. Batley, Esq., C.E.	8	1 0	986	..	36·92	187	141
	5.—TRENT—Derwent. 7 sq. mi.								
D	Burbage (Parsons House)*	Sheffield Corporation W.W.	8	1 0	1309	..	31·75	162	126
	Burbage (Higger Lodge)*	Sheffield Corporation W.W.	5	1 0	1225	36·8	31·21	..	..
	Burbage (Upper Burbage)*	Sheffield Corporation W.W.	5	1 0	1364	36·1	33·58	..	..
M	Derwent Dale (Abbey Brook) .65	S. B. Winser, Esq., C.E.	5	1 0	825	45·2	35·70	..	..
M	Derwent Dale (Howden Cl'gh) .64	S. B. Winser, Esq., C.E.	5	1 0	1030	44·4	34·61	..	..
	Derwent Dale (Howden Ho.) .19	S. B. Winser, Esq., C.E.	8	1 0	890	44·1	36·23	..	..
M	Derwent Dale (Sandy Lee) No. 7	S. B. Winser, Esq., C.E.	5	1 0	1340	..	37·15	..	..
	6.—TRENT—Left Bank Tributaries. 143 sq. mi.								
d	Lindrick Common (Woodside)	Mrs. M. E. Eardley	5	1 0	250	25·5	21·90	..	100
D	Rossington Main Colliery	Rossington Colliery Co., Ltd.	5	1 0	22	..	24·39	151	100
	7.—OUSE—Don. 564 sq. mi.								
	Burbage (Badger Ho.)†	Sheffield Corporation W.W.	5	1 0	1138	..	32·69	..	..
D	Sheffield W.W. (Redmires R.) (R)	Sheffield Corporation W.W.	10	5 0	1110	40·3	33·51	174	119
D	Sheffield W.W. (Redmires Res.)	Sheffield Corporation W.W.	8	4 0	1110	39·9	33·08	174	120
D	Sheffield W.W. (Redmires R.) *new g.*	Sheffield Corporation W.W.	5	1 0	1110	..	34·40	174	122
	§Rivelin (Oaking Clough)	Sheffield Corporation W.W.	8	1 0	1160	39·8	33·21	..	..
	Rivelin (Middle Moss)	Sheffield Corporation W.W.	5	1 0	1168	41·0	35·47	..	..
D	Sheffield W.W. (Rivelin) (+A)	Sheffield Corporation W.W.	8	1 6	564	35·2	29·98	158	116
	Sheffield W.W. (Black Clough)	Sheffield Corporation W.W.	5	1 0	1175	40·3	36·70	..	..
D	Sheffield W.W. (Crookes)	Sheffield Corporation W.W.	5	1 1	629	..	25·24	146	103
D	Sheffield W.W. (Crookes)	Sheffield Corporation W.W.	8	2 0	629	..	24·29	147	100
D	SHEFFIELD (Weston Park)	The Corpn. (E. Howarth, F.R.A.S.)	8	1 0	428	30·4	24·96	150	103
	Loxley Valley (Crawshaw Wood)	Sheffield Corporation W.W.	5	1 0	1175	..	32·99	..	..
	Loxley Valley (Broadcar)	Sheffield Corporation W.W.	5	1 0	1004	44·4	38·07	..	..
	Loxley V. (Oaks Fm. Damflask)	Sheffield Corporation W.W.	5	1 0	650	36·1	31·69	..	..
	Loxley V. (Loftshaw, Strines)	Sheffield Corporation W.W.	5	1 0	1011	43·2	35·19	..	..
D	Loxley Valley (Bradfield Filters)	Sheffield Corporation W.W.	8	1 0	551	..	32·16	160	120
D	Loxley V. (Dale Dike Res.)	Sheffield Corporation W.W.	8	1 0	715	39·5	34·12	179	130
	Loxley Valley (Bragging Moss)	Sheffield Corporation W.W.	5	1 0	1360	..	40·25	..	..
	Loxley V. (Thornseat)	Sheffield Corporation W.W.	5	1 0	1326	42·6	35·19	..	..
	Loxley V. (Rocher Flat)	Sheffield Corporation W.W.	5	1 0	1106	37·1	31·60	..	..
	Loxley V. (Emlin Moor)	Sheffield Corporation W.W.	5	1 0	998	41·3	36·03	..	..
	Loxley Valley (White Lee Moor)	Sheffield Corporation W.W.	5	1 0	1170	..	35·35	..	..
	Loxley Valley (Hobson Moss)	Sheffield Corporation W.W.	5	1 0	1530	..	39·69	..	..
D	Rotherham (Ulley Res.) (2)	Vincent Turner, Esq., C.E.	5	1 0	184	23·4	23·65	120	93
D	Rotherham (Ulley Res.) (3)	Vincent Turner, Esq., C.E.	5	1 0	132	23·2	24·67	120	94
D	Wincobank (Sewage Works) (+A)	J. Haworth, Esq.	5	2 0	90	23·0	23·31	144	100
D	Rotherham (Sitwell Vale)	G. Howard, Esq.	5	1 0	300	26·0	23·42	145	102
D	Rotherham (Kimberw'rth Sch.)	Vincent Turner, Esq., C.E.	5	1 0	258	24·7	21·93	147	103
D	Rotherham (Aldwarke Sew. Wks.) (+A)	James H. Kershaw, Esq.	5	1 4	71	24·7	23·70	146	102
D	Rotherham (Thrybergh)	F. O. Kirby, Esq., C.E.	8	1 0	184	23·8	23·71	149	99
D	Rawmarsh	L. Atkinson, Esq.	5	1 0	225	..	21·71	145	93
D	Conisborough (Firsby Res.)	F. O. Kirby, Esq., C.E.	8	1 4	189	26·1	25·28	162	109
	Ewden (Middle Moss)	Sheffield Corporation W.W.	5	1 0	1600	51·0	39·65	..	..
	Ewden (Broomhead Moor)	Sheffield Corporation W.W.	5	1 0	1370	48·6	39·28	..	..
D	Ewden (Canyard Brook)	Sheffield Corporation W.W.	5	1 0	585	..	34·22	174	121
	Ewden (Candle Rush)	Sheffield Corporation W.W.	5	1 0	1400	..	39·75	..	..
	Ewden (Wightwizzle)	Sheffield Corporation W.W.	5	1 0	860	41·5	36·57	..	..
	Ewden (Broomhead Hall)	Sheffield Corporation W.W.	5	1 0	905	42·1	34·66	..	..
D	Ewden (More Hall Reservoir)	Sheffield Corporation W.W.	8	1 0	408	33·9	28·81	161	115
D	Ewden (Broomhead Reservoir)	Sheffield Corporation W.W.	8	1 0	600	35·6	32·51	174	124

* Station previously in Derbyshire—6. † Station previously in Derbyshire—8. § Gauge possibly over-exposed.

DIVISION IX—YORKSHIRE—(*con.*).

	STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
	WEST RIDING—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
	7.—OUSE—Don—(*con.*).								
	Ewden (Margery Hill)..No. 2	Sheffield Corporation W.W..	5	1 0	1784	..	43·03	..	..
	Ewden (Waldershaigh)	Sheffield Corporation W.W..	..	..	875	35·3	31·79	..	..
	Ewden (Brown Edge)	Sheffield Corporation W.W..	5	1 0	1325	50·5	39·69	..	..
D	Wentworth Woodhouse	Mr. A. Third	5	0 10	360	27·2	26·35	139	96
D	Mexborough	G. Fenwick Carter, Esq., C.E.	5	1 6	77	22·4	23·06	145	108
	Wortley (Service Reservoir)	J. R. Fox, Esq., C.E.	5	1 0	700	30·0	25·42	153	107
	Midhope Moor (Barnside)	J. R. Fox, Esq., C.E.	5	1 0	1000	43·4	30·24	195	127
	Little Don Val. (Laund Clough)	Sheffield Corporation W.W..	5	1 0	1515	..	44·87	..	..
D	Little Don Val. (Underbank Res.)	Sheffield Corporation W.W..	8	1 6	604	34·6	31·53	163	128
	Little Don Val. (Brockholes)	Sheffield Corporation W.W..	5	1 0	902	34·0	30·49	..	..
	Little Don Val. (Sheep House)	Sheffield Corporation W.W..	5	1 6	945	34·2	30·55	..	..
	Langsett Moor (Midhope) *new g.*	J. R. Fox, Esq., C.E.	5	1 0	823	..	33·81	157	116
D	Langsett Moor (Up. Midhope)	Sheffield Corporation W.W..	8	1 6	925	41·6	32·33	164	123
	Langsett Moor (Mickleden)	Sheffield Corporation W.W..	5	1 0	1217	48·0	39·14	..	..
	Langsett Moor (Mickleden) *new g.*	Sheffield Corporation W.W..	5	1 0	1110	..	41·59	..	..
	Langsett Moor (Catclough)	Sheffield Corporation W.W..	8	1 0	1516	47·8	41·05	..	..
	Langsett Moor (Fiddlers Green)	Sheffield Corporation W.W..	8	1 6	1493	48·7	41·54	..	..
	Langsett Moor (Fiddler's G.) *new g.*	Sheffield Corporation W.W..	5	1 0	1480	..	41·83	..	..
	Langsett Moor (Border Hill)	Sheffield Corporation W.W..	5	1 0	1148	46·9	38·17	..	..
D	Langsett Moor (Swinden Lodge)	Sheffield Corporation W.W..	8	1 0	1037	44·0	35·15	169	127
D	Langsett Moor (Flouch Road)	Sheffield Corporation W.W..	8	1 0	960	40·3	33·74	162	121
D	Wath-upon-Dearne (Chapel St.)	Dr. T. Crowley	8	1 3	188	24·8	22·39	135	99
	Hazlehead (Cat Clough)	J. R. Fox, Esq., C.E.	5	1 0	889	..	36·65	..	..
d	Balby (Sewage Works)	F. O. Kirby, Esq., C.E.	5	1 0	29	..	(25·20)	(150)	(98)
d	Low Pasture P.S.	F. O. Kirby, Esq., C.E.	5	1 0	24	..	(23·87)	(156)	(97)
D	Doncaster (Pumping Station) *new g.*	F. O. Kirby, Esq., C.E.	5	1 0	31	..	26·05	139	104
D	Doncaster (Avenue Road)	M. H. Stiles, Esq.	5	1 3	60	25·2	27·72	138	104
D	Bolton-on-Dearne (Goldthorpe)	E. Washington, Esq.	5	1 6	93	24·3	24·56	154	98
w	Dunford Bridge (Windledon)	Dewsbury Water Works	8	2 2	1100	49·3	36·96	..	..
D	Dunford Bridge Res.	Dewsbury Water Works	8	2 0	1111	49·2	37·05	169	135
w	Dunford Bridge (Dearden)	Dewsbury Water Works	8	1 6	1244	49·3	38·12	..	..
w	Dunford Bridge (Harden)	Dewsbury Water Works	8	2 0	1300	50·9	39·01	..	..
w	Dunford Bridge (Snailsden)	Dewsbury Water Works	8	2 0	1477	50·8	38·29	..	..
D	Darfield (Sewage Wks.)	The Surveyor	5	1 0	106	..	23·83	132	91
	Penistone (Scout Dike Res.)	J. R. Fox, Esq., C.E.	5	1 0	730	32·8	29·56	164	119
	Penistone (Ingbirchworth Res.)	J. R. Fox, Esq., C.E.	5	1 0	853	38·0	34·33	153	96
	Penistone (Broadstone Res.)	J. R. Fox, Esq., C.E.	5	1 0	..	36·8	30·35	155	116
D	Barnsley (Jordan Hill)	J. R. Fox, Esq., C.E.	5	1 0	460	26·2	23·55	149	103
D	Bentley Colliery	Messrs. Barber, Walker & Co., Ltd.	5	1 0	23	..	24·71	143	93
d	Cawthorne (Cannon Hall)	J. M. Spencer Stanhope, Esq.	5	0 11	418	29·1	24·29	..	95
D	Barnsley (Burntwood Hall)	J. Dymond, Esq.	5	1 0	378	25·9	26·31	156	102
D	Kirk Bramwith	C. E. Farran, Esq., C.E.	5	1 6	22	23·2	20·72	142	93
D	Goole	Aire & Calder Navigation	5	1 0	18	22·9	24·72	165	113
	8.—OUSE—Aire—Calder. 361 sq. mi.								
D	Holmbridge (Yateholme Res.)	W. H. Duckworth, Esq.,C.E.	5	1 0	1009	59·2	46·06	173	141
D	Holmbridge (Yateholme Farm)	W. H. Duckworth, Esq.,C.E.	5	1 0	861	56·4	44·09	173	139
	Holmbridge (Bilberry Res.)	Messrs. Mallinson & Son	5	1 0	970	52·4	34·91	..	..
	Holmfirth (Holme Styes Res.)	Messrs. Mallinson & Son	5	1 0	830	45·7	33·46	..	..
	Holmfirth (Boshaw Whams R.)	Messrs. Mallinson & Son	5	1 0	930	49·7	34·15	..	..
D	Holmfirth (Thongsbridge)	Mrs. Robson	8	1 0	..	46·2	38·57	140	113
D	Holmfirth (Snape Res.)	Holmfirth U.D.C.	6	1 0	1060	..	34·99	175	133
	Meltham (Harden Moss) *new g.*	J. W. Armitage, Esq., C.E..	8	1 0	1212	..	39·95	..	..
	‖Wessenden Head *new g.*	J. W. Armitage, Esq., C.E..	8	1 0	1270	..	35·47	..	..
	Wessenden (Holly Bank Moss)	J. W. Armitage, Esq., C.E..	8	1 0	1280	..	37·53	..	..
	‖Wessenden (Old Reservoir)	J. W. Armitage, Esq., C.E..	8	1 0	940	..	37·26	..	..
	Wessenden (Butterley Moss)	J. W. Armitage, Esq., C.E..	8	1 0	1110	..	35·02	..	..
d	Netherthong Nat. School	S. D. Butterworth, Esq.	5	1 0	700	..	29·89	..	113
	‖Wessenden (Bobus)	J. W. Armitage, Esq., C.E..	8	1 0	1200	..	31·87	..	..
	‖Meltham (Brow Grains)	J. W. Armitage, Esq., C.E..	8	1 0	900	45·0	38·13	..	..
	Meltham (Royd Edge)	C. L. Brook, Esq.	8	1 0	585	48·3	38·05	..	..
D	MELTHAM (Harewood Lodge)	C. L. Brook, Esq.	8	1 0	514	44·5	35·77	177	128

‖ Gauge in 6ft. square iron hurdle fence, 6ft. high.

DIVISION IX—YORKSHIRE—(*con.*).

STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or more.	1933. Day with ·04 in. or more.
WEST RIDING—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
8.—OUSE—Aire—Calder—(*con.*).								
Meltham Grange	J. W. Armitage, Esq., C.E..	8	1 0	850	41·1	36·37	..	..
‡Marsden Reservoir	L.M. & S. Rly.	8	2 4	692	50·5	29·88	..	..
Marsden (Deer Hill)	J. W. Armitage, Esq., C.E..	8	1 0	1149	42·8	39·48	..	..
Marsden (Deer Hill) *new g*	J. W. Armitage, Esq., C.E..	8	1 0	1149	45·0	38·43	..	..
D Slaithwaite (Blackmoorfoot)	J. W. Armitage, Esq., C.E..	8	1 0	800	43·1	34·34	182	130
D Slaithwaite (Inglewood)	J. Woodhead, Esq.	5	1 0	546	43·5	34·58	189	127
d Huddersfield (Bank Field, Golcar)	Miss M. J. R. Sykes.	6	1 0	400	39·0	33·04	..	114
D HUDDERSFIELD (Ravensknowle)	The Corpn. (Dr. Woodhead)	8	0 11	325	30·1	25·49	166	103
w Huddersfield (Langley Ter.) (No. 1)	S. Morris Bower, Esq.	5	1 0	761	33·7	28·43	..	..
Huddersfield (Crosland Rd.) (No. 2)	S. Morris Bower, Esq.	4	1 0	761	35·2	28·27	..	..
D HUDDERSFIELD (OAKES)	S. Morris Bower, Esq.	5	1 0	761	34·3	28·14	181	118
w Moss Moor (Linsgreave)	Wakefield Corpn. W.W.	5	1 0	1264	51·2	38·11	..	..
D Rishworth (G. Walden Edge) *old*	Wakefield Corpn. W.W.	8	1 2	1135	49·3	36·02	200	146
D Rishworth (G. Walden Edge) *check*)	Wakefield Corpn. W.W.	5	1 0	1135	..	36·60	200	141
D Rishworth G. Walden Edge) *S.g.*	Wakefield Corpn. W.W.	5	1 0	1135	..	37·13	200	144
w Rishworth (Stott Hall) *new*	Wakefield Corpn. W.W.	5	1 0	935	45·0	35·22	..	..
D Rishworth Lodge	Wakefield Corpn. W.W.	5	0 11	950	..	33·25	185	129
D Rishworth (Green Withens Res.)	Wakefield Corpn. W.W.	5	1 0	1205	48·2	34·70	198	142
D Rishworth (Ringstone Res.) W.	Wakefield Corpn. W.W.	5	1 0	940	..	33·52	192	125
D Rishworth (Ringstone Res.) (Lower)	Wakefield Corpn. W.W.	5	1 0	962	45·8	33·34	192	123
w Rishworth Moor (Greystones)	Wakefield Corpn. W.W.	5	1 4	1192	50·6	39·60	..	..
d Soyland Moor (Rishworth Drain)	C. J. Batley, Esq., C.E.	8	1 0	1290	52·9	38·60	..	..
w Soyland Moor (Summit) East)	Wakefield Corpn. W.W.	5	0 11	1218	51·0	38·86	..	..
D Soyland Moor (Stansfield Hey)	Wakefield Corpn. W.W.	5	1 0	700	..	32·79	180	140
D Soyland Moor (Baitings Gate)	Wakefield Corpn. W.W.	5	1 0	943	50·6	39·05	215	144
d Soyland Moor (Byron Edge)	C. J. Batley, Esq., C.E.	8	1 0	1251	48·3	32·56	..	..
w Soyland Moor (Manshead)	Wakefield Corpn. W.W.	5	1 0	1225	51·2	37·29	..	..
d Walsden (White Holme)	C. J. Batley, Esq., C.E.	8	1 0	1240	..	33·61	..	..
D Walsden (Calf Lee)	Rochdale Corporation.	8	1 0	960	..	35·68	182	136
D Walsden (Warland Res.)	Rochdale Corporation.	8	1 0	1245	48·6	38·96	183	142
D Walsden (Warland Drain)	Rochdale Corporation.	8	1 0	1250	51·9	36·10	183	136
Walton Hall	E. T. B. Simpson, Esq.	5	0 10	137	22·5	22·68	..	..
D Horbury (Addingford Hos.)	J. H. Horsfall, Esq.	8	1 0	169	23·3	23·41	144	96
D Mirfield (Cote Wall)	F. P. Mitchell, Esq.	8	1 0	200	30·2	26·92	137	104
D WAKEFIELD (Clarence Park)	Wakefield Corpn. W.W.	5	1 0	124	25·4	24·26	170	107
d Wakefield (Fieldhead Res.)	Wakefield Corpn. W.W.	5	1 0	250	24·0	19·79	..	98
D Normanton (Haw Hill Park)	The Surveyor, U.D.C.	8	1 1	136	23·3	22·28	155	101
w Walsden (Ramsden Hill)	Rochdale Corporation.	5	1 0	1326	52·0	36·69	..	..
D Walsden (Ramsden Reservoir)	Rochdale Corporation.	5	1 0	993	52·7	35·88	164	135
D Todmorden (Fielden Hospital)	L. A. Crabtree, Esq.	5	1 0	650	..	34·46	189	136
D Todmorden (Sourhall Hospital)	L. A. Crabtree, Esq.	5	1 0	1020	53·8	38·67	178	140
d Halifax (Public Library)	E. Green, Esq.	8	1 0	625	34·3	25·16	..	..
D§Dewsbury (Mitchell Laithes Sew.Wks.)	The Manager	8	1 0	115	..	24·08	144	105
D Dewsbury (Crow Nest Park)	H. Roscoe, Esq.	8	0 9	277	..	26·15	155	107
D Batley (Staincliffe Reservoir)	W. H. Duckworth, Esq., C.E.	5	1 0	492	24·1	23·59	151	107
D Ardsley (Jaw Hill Filters)	Wakefield Corpn. W.W.	5	1 0	315	22·4	21·91	141	106
D Ardsley Reservoir ..... Upper	Wakefield Corpn. W.W.	5	1 2	395	23·9	20·70	146	99
D Ardsley Reservoir ..... Lower	Wakefield Corpn. W.W.	5	1 2	326	23·8	21·73	146	100
D Halifax W.W. (Albert)	E. P. Brook, Esq., C.E.	5	1 0	795	35·3	28·64	176	123
D Halifax W.W. (Gibbet)	E. P. Brook, Esq., C.E.	5	1 0	568	34·6	27·33	157	118
D Halifax W.W. (Ramsden Wood)	E. P. Brook, Esq., C.E.	5	1 0	815	38·3	30·11	144	123
D Hebden Bridge (Burnside)	Miss M. Hoyle,	5	1 0	830	43·9	34·97	198	138
D Halifax W.W. (Castle Carr Lo.)	E. P. Brook, Esq., C.E.	5	1 0	1060	42·6	33·63	207	148
w Halifax W.W. (Midgley Mr.) *new*	E. P. Brook, Esq., C.E.	8	1 0	1350	44·3	35·31	..	..
w Halifax W.W. (Warley Mr.) *new*	E. P. Brook, Esq., C.E.	8	1 0	1325	43·0	33·39	..	..
D Halifax W.W. (Ogden)	E. P. Brook, Esq., C.E.	5	1 0	990	..	32·65	165	137
w Halifax W.W. (Ovenden Mr.) *new*	E. P. Brook, Esq., C.E.	8	1 0	1375	41·8	36·11	..	..
w Halifax W.W. (Gorple)	E. P. Brook, Esq., C.E.	8	1 0	1320	47·0	33·76	..	..
D Halifax W.W. (Gorple Res.)	E. P. Brook, Esq., C.E.	5	1 6	1028	41·1	36·58	190	144
D Halifax W.W. (Widdop)	E. P. Brook, Esq., C.E.	5	1 0	1050	46·3	34·44	177	135
D Halifax W.W. (Walshaw Dean L.)	E. P. Brook, Esq., C.E.	5	1 0	1040	48·1	36·90	176	137
w Halifax W.W. (Walshaw Dean)	E. P. Brook, Esq., C.E.	8	1 0	1380	44·8	35·19	..	..

‡ Gauge on a steep bank.

§ Exposure unorthodox.

DIVISION IX—YORKSHIRE—(*con.*).

STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
WEST RIDING—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
9.—OUSE—Aire. 504 sq. mi.								
D PONTEFRACT (The King's School)	The Headmaster	5	1 0	255	23·3	21·36	136	92
D Pontefract (Roall W.W.)	W. H. Newton, Esq., C.E.	8	1 0	42	23·0	21·37	167	105
Bradford (Grange Rd., Horton)	A. E. Chilton, Esq.	5	3 0	450	34·3	27·75	164	121
Bradford (Brayshaw Reservoir)	W. Newlands, Esq., C.E.	5	1 0	982	36·5	28·54	..	..
D BRADFORD (Lister Park)	The Corporation	8	1 0	439	33·9	24·87	165	108
D Bradford (Thornton Moor Filters)	W. Newlands, Esq., C.E.	5	1 0	1190	44·3	31·12	185	139
D Bradford (Stubden Res.) No. 8.	W. Newlands, Esq., C.E.	5	1 0	1071	44·9	31·58	180	142
M Bradford (Nan Scar, Oxenhope)	W. Newlands, Esq., C.E.	5	1 0	1101	47·6	30·79	..	..
M Bradford (Stairs Top, Oxenhope)	W. Newlands, Esq., C.E.	5	1 0	1360	52·4	(36·97)	..	..
D Bradford (Leeming Reservoir)	W. Newlands, Esq., C.E.	5	1 0	850	41·0	32·72	172	134
M Bradford (Doe Park Reservoir)	W. Newlands, Esq., C.E.	5	1 0	760	..	32·68	..	..
M Bradford (Leeshaw Res.)	W. Newlands, Esq., C.E.	5	1 0	875	47·3	35·73	..	..
D Bradford (Chellow Dean Res.)	W. Newlands, Esq., C.E.	5	1 0	645	34·5	28·63	166	123
D Bradford (Chellow Heights Res.)	W. Newlands, Esq., C.E.	5	1 0	848	36·6	24·48	135	119
Bradford (Hewenden Res.)	W. Newlands, Esq., C.E.	5	1 0	701	..	28·60	..	..
M Bradford (Heaton Reservoir)	W. Newlands, Esq., C.E.	5	1 0	531	32·6	24·06	..	..
Leeds (Wortley Reservoir)	H. Shortreed, Esq.	8	0 9	307	28·1	23·23	148	104
Leeds (Knostrop)	H. Shortreed, Esq.	8	0 9	72	24·0	20·01	132	98
Leeds (Great George Street)	H. Shortreed, Esq.	5	0 9	180	26·0	23·34	142	113
Leeds (Woodhouse Moor)	H. Shortreed, Esq.	8	0 9	307	26·7	23·75	174	116
D Seacroft (Leeds City Hospital)	Dr. J. S. Anderson	8	1 0	235	29·3	24·34	136	109
Leeds (Weetwood Res.)	H. Shortreed, Esq.	8	0 9	328	27·5	24·99	163	116
d Leeds (Weetwood Garth)	Mrs. F. Gott, J.P.	5	1 0	300	27·7	24·43	..	100
D Leeds (Weetwood)	F. J. Kitson, Esq.	5	2 0	250	28·4	24·02	137	99
Leeds (Allerton Hill)	T. Harding Churton, Esq.	5	0 8	418	..	21·09?	..	..
D Haworth (Harbour Lodge)	A. Atkinson, Esq., C.E.	8	1 0	1187	52·5	37·84	181	137
D Haworth (Lower Laithe Res.) (+A)	A. Atkinson, Esq., C.E.	6	0 10	772	48·1	35·07	176	128
D Oakworth (Oldfield Filters)	A. Atkinson, Esq., C.E.	5	1 0	1008	44·6	35·72	188	137
D Bingley (Sewage Works)	J. R. Brown, Esq.	5	1 1	227	34·6	26·57	160	115
D Rawdon	Rawdon U.D.C.	5	1 0	579	29·0	24·10	139	105
D Bingley (Gilstead Filters)	W. Newlands, Esq., C.E.	5	1 0	572	..	27·56	162	115
D Bingley (Park Top)	M. E. Burton, Esq.	5	1 0	650	35·3	27·46	164	118
D Keighley (The Knowle)	P. Clough, Esq.	5	1 0	390	38·0	26·55	165	118
D Keighley (Victoria Park)	R. Butterfield, Esq.	5	1 0	304	35·7	25·79	164	120
D Bingley (East Morton)	J. Rhodes, Esq.	5	1 0	530	32·2	26·34	164	112
Bingley (Sunnydale Reservoir)	W. Newlands, Esq., C.E.	5	1 0	825	33·1	(24·97)	..	..
d Salterforth (Barnoldswick W.W.)	Barnoldswick U.D.C.	8	1 4	832	46·6	33·82	..	..
D Earby (Sewage Works) (+A)	The Surveyor)	5	1 9	426	39·3	25·96	156	115
M Silsden (Gill Grange)	W. Newlands, Esq., C.E.	5	1 0	883	30·8	(25·15)	..	..
D Silsden Reservoir	W. Newlands, Esq., C.E.	5	1 0	560	31·2	25·81	162	129
M Silsden (Cringles Res. Site)	W. Newlands, Esq., C.E.	5	1 0	715	31·3	24·36	..	..
D Elslack (Stories Farm) *new g.*	Barnoldswick U.D.C.	5	1 0	675	..	27·87	179	132
Carleton (Beech Hill)	W. Cyril Empson, Esq.	8	1 3	425	37·8	26·04	..	..
D Skipton (Town Hall) (A)	A. E. W. Aldridge, Esq.	6	1 6	367	33·5	24·68	155	123
Gargrave (Banks Hill Bank Nwtn.)	Leeds & Liv'pool Canal Co.	8	1 0	545	35·5	23·45	..	..
Gargrave (Ray Bridge Hill)	Leeds & Liv'pool Canal Co.	8	0 10	459	34·2	29·76	..	..
D Skipton (Embsay Moor) (+A)	A.E.W. Aldridge, Esq.	5	1 0	670	..	26·44	160	133
Winterburn (Long Hill)	Leeds & Liv'pool Canal Co.	8	1 0	705	37·8	30·63	..	..
Winterburn (Brown Hill)	Leeds & Liv'pool Canal Co.	8	1 0	961	42·8	34·52	..	..
10.—OUSE—Wharfe. 408 sq. mi.								
D Aberford (Lotherton Hall)	Col. R. T. T. Gascoigne, D.S.O.	5	1 0	208	24·5	24·09	141	112
Adel (Eccup, East)	H. Shortreed, Esq.	8	0 9	375	29·3	28·16	204	118
D Harewood House	Dowager Countess of Harewood.	5	0 10	300	29·7	25·38	147	110
D Otley (Sewage Works)	C. F. Hodgson, Esq., C.E.	5	1 0	172	..	26·43	142	111
D Ilkley (Silverwell Cottage)	The Engineer & Surveyor	5	1 0	900	38·2	(32·05)	179	135

DIVISION IX—YORKSHIRE—(*con.*).

	STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
	WEST RIDING—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
	10.—OUSE—Wharfe—(*con.*).								
D	Ilkley (Spence's Garden)	The Engineer & Surveyor ..	5	1 0	315	35·1	28·67	139	119
	Leathley (Lindley Wood, S.)	H. Shortreed, Esq., ...	8	0 9	312	31·6	28·94	173	114
D	Ilkley (March Gill Reservoir)	C. F. Hodgson, Esq., C.E....	5	1 0	655	34·0	30·01	188	131
D	York (Middlethorpe Hall)...No. 2.	Mr. J. Fletcher.....	5	1 0	48	..	23·74	171	106
D	York (Chalfonts)	Arnold S. Rowntree, Esq....	5	0 9	57	..	21·60	132	107
D	York (Bishopthorpe Road)	J. Terry & Sons Ltd.....	5	1 0	54	..	21·43	144	103
d	York (Cherry Hill)	Messrs. H. Richardson & Co.	5	1 6	50	24·2	23·20	..	..
D	York (Acomb Landing)	W. H. Humphreys, Esq., C.E.	5	1 0	40	22·6	22·59	141	100
M	Skipton (Counter Hill)	W. Newlands, Esq., C.E. ..	5	1 0	951	30·2	25·98	..	..
M	Skipton (Chelker Reservoir)	W. Newlands, Esq., C.E. ..	5	1 0	730	32·9	27·74	..	..
	Fewston (Timble Ings)	H. Shortreed, Esq.	8	0 9	912	35·5	30·56	179	122
	Fewston (Swinsty, East)	H. Shortreed, Esq.	8	0 9	460	34·4	28·51	160	106
	Fewston, North	H. Shortreed, Esq.	8	0 9	525	..	32·43	184	127
	Fewston (Blubberhouses)	H. Shortreed, Esq.	8	0 9	575	37·1	35·20	182	135
D	Bolton Abbey Estate Office	A. Downs, Esq.....	5	1 2	368	36·3	28·90	177	134
D	Barden Reservoir	W. Newlands, Esq., C.E. ..	5	1 0	746	41·8	32·96	201	138
M	Upper Barden Reservoir	W. Newlands, Esq., C.E. ..	5	1 0	1170	..	31·32	..	..
	Thruscross (Lane Head)	H. Shortreed, Esq.	8	0 9	950	..	30·35	194	130
M	Burnsall (Thorpe Fell)	W. Newlands, Esq., C.E. ..	5	1 0	1661	..	(30·48)		
M	Burnsall (Sandbed Beck)	W. Newlands, Esq., C.E. ..	5	1 0	676	41·0	31·75	..	..
D	Burnsall Rectory	Rev. J. Wood.....	8	4 1	504	43·0	32·53	183	148
d	Grassington (Greenways)	Mrs. D. Sampson.....	5	0 5	700	..	29·22	..	..
D	Grimwith Reservoir	W. Newlands, Esq., C.E. ..	5	1 0	893	43·9	34·33	192	148
M	Grimwith (Trunla Hill)	W. Newlands, Esq., C.E. ..	5	1 0	1201	..	38·10	..	..
D	Buckden	G. E. Clayton, Esq.....	5	1 0	800	54·9	40·63	177	148
D	Oughtershaw Hall	Miss G. J. Woodd.....	5	1 6	1175	68·7	47·44	185	151
	11.—OUSE—Nidd. 254 sq. mi.								
	Spofforth (Sewage Works)	C. E. Rivers, Esq., C.E.....	5	1 0	184	27·0	25·82	159	111
d	Poppleton	Second Anglo-Scottish Sugar Corpn..	8	0 8	60	..	22·65	..	..
D	Wetherby (Ribston Hall)	The Head Gardener	5	1 2	130	26·5	27·36	178	120
M	Harrogate W.W. (Ling Cottage)	A. S. West, Esq., C.E.....	5	1 0	740	30·5	27·49	..	..
M	Harrogate W.W. (Broad Dubb)	A. S. West, Esq., C.E.....	5	1 0	725	31·8	(28·81)	..	..
M	Harrogate W.W. (Cobblers Cott.)	A. S. West, Esq., C.E.....	5	1 0	730	30·9	29·25	..	..
D	Harrogate W.W. (Ten Acres Res.)	A. S. West, Esq., C.E.....	8	1 6	620	..	29·37	187	135
D	Harrogate W.W. (Scargill Res.)	A. S. West, Esq., C.E.....	8	1 0	646	32·4	29·70	189	136
D	Harrogate W.W. (Beaver Dyke R.)	A. S. West, Esq., C.E.....	8	0 11	575	31·0	28·75	189	132
M	Harrogate W.W. (John o' Gaunts)	A. S. West, Esq., C.E.....	5	1 0	600	31·2	27·06	..	..
M	Harrogate W.W. (Long Stoop)	A. S. West, Esq., C.E.....	5	1 0	700	31·3	27·61	..	..
M	Harrogate W.W. (Knab's Moor)	A. S. West, Esq., C.E.....	5	1 0	700	30·0	27·73	..	..
D	Harrogate (Harlow Moor Obsy.)	C. E. Rivers, Esq., C.E.....	5	1 0	478	30·6	26·50	155	98
D	Harrogate (Harlow Hill Res.)	A. S. West, Esq., C.E.....	8	1 0	589	..	25·39	164	110
D	Harrogate (Duchy Road)	J. S. Farrah, Esq.....	5	1 0	450	29·2	27·48	148	111
D	Harrogate (Irongate Bridge Res.)	A. S. West, Esq., C.E.....	8	1 6	455	29·3	27·03	167	117
d	Knaresborough (Goldsbro Hall Gdns)	Mr. R. Wilson.....	5	1 0	112	25·8	(26·32)	..	..
D	Knaresborough (The Abbey)	Rev. Canon J. T. Hartley...	5	1 0	140	26·3	26·43	168	117
d	Knaresborough (Water Tower)	A. S. West, Esq., C.E.	8	1 0	240	..	28·47	170	122
	Harrogate (Bilton Sewage Works)	C. E. Rivers, Esq., C.E.....	5	1 0	208	28·5	25·48	163	109
D	Birstwith Hall	Sir F. A. Aykroyd, Bt.....	5	1 0	400	34·4	30·37	176	120
D	Birstwith (Swarcliffe)	Capt. C. S. Greenwood.....	5	1 0	510	33·9	27·27	159	116
	Ramsgill (Holme Ho. Gouthwaite)	W. Newlands, Esq., C.E. ..	5	1 0	464	39·9	29·14	..	..
D	Ramsgill (Raygill House)	W. Newlands, Esq., C.E. ..	5	1 0	925	46·7	32·01	163	138
D	Ramsgill	W. Newlands, Esq., C.E. ..	5	1 0	450	42·1	30·85	151	127
d	Middlesmoor (Stean Moor)	Sir F. A. Aykroyd, Bart.....	5	1 0	1100	49·6	(39·43)	..	..
M	Nidderdale (East Gill Head)	W. Newlands, Esq., C.E. ..	5	1 0	1710	57·6	42·81	..	..
M	Nidderdale (Rain Stang)	W. Newlands, Esq., C.E. ..	5	1 0	1470	47·4	(34·67)	..	..
D	Nidderdale (New Houses)	W. Newlands, Esq., C.E. ..	5	1 0	755	45·8	34·53	162	136
D	Nidderdale (West Houses)	W. Newlands, Esq., C.E. ..	5	1 0	1165	52·5	45·60	219	153

DIVISION IX—YORKSHIRE—(*con.*).

STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
WEST RIDING—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
12.—OUSE—Ure. 110 sq. mi.								
Dallow Moor (Harper Hill)	H. Shortreed, Esq.,	8	0 9	858	..	28·65	149	128
d Ripon (Studley Royal Gdns.)	F. M. Sutherland, Esq.	5	1 6	250	29·1	(25·60)	..	..
D Ripon (St.Olave's Sch.)	The Headmaster	5	1 0	150	..	24·96	168	105
D Ripon (The Red House)	F. D. Wise, Esq., C.E.	5	1 0	120	27·2	26·49	140	107
Kirby Malzeard (Drovers' Inn)	H. Shortreed, Esq.,	8	0 9	576	36·0	30·43	177	132
Kirby Malzeard (Hawsett)	H. Shortreed, Esq.,	8	0 9	820	37·1	30·78	190	133
Kirby Malzeard (Hambleton H.)	H. Shortreed, Esq.,	8	0 9	1106	39·7	35·06	..	..
Kirby Malzeard (Bagwith Brae)	H. Shortreed, Esq.,	5	0 9	703	32·9	27·25	185	107
Kirby M. (Stone & Ears Wham.)	H. Shortreed, Esq.,	8	0 9	1118	39·7	29·24	..	..
EAST RIDING. (Area, 1,176 sq. mi.).								
1.—OUSE—Left Bank Tributaries. 82 sq. mi.								
D Osgodby (Fruit Testing Stn.)	Prof. of Agric. Leeds Univ.	5	1 0	30	24·2	22·32	147	102
D York (Heslington)	Hn. L. de Yarburgh-Bateson	8	1 0	39	25·3	25·93	151	115
D York (Dunnington Hall)	Miss E. C. Hildyard	8	1 2	110	24·6	25·32	193	132
2.—OUSE—Derwent. 248 sq. mi.								
D Birdsall Gardens	Mr. J. Anderson	5	1 2	308	29·2	27·29	161	115
D Westow Vicarage	Rev. G. T. W. Purchas	5	1 0	190	25·8	23·98	178	112
D Rillington (Scampston Hall)	W. H. St. Quintin, Esq.	5	1 6	102	27·1	26·93	174	125
D Ganton (Ganton Hall)	Harold Wrigley, Esq.	5	1 0	250	27·5	27·95	190	133
3.—HUMBER—Left Bank Tributaries. 675 sq. mi.								
D Spurn Head (Lighthouse) *new g.*	Lightkeeper (M.O.)	8	1 0	29	24·0	22·57	150	100
D Patrington (Rose Cottage)	Miss S. A. Kirman, for M.O.	5	1 3	46	23·3	20·66	144	105
D Patrington Rectory	Rev. P. R. Frost	5	1 0	50	22·0	19·20	169	100
D Withernsea (Lascelles Av.)	H. Knight, Esq.	5	0 10	20	..	24·67	180	110
D Hull (Pearson Park)	The Superintendent	5	0 10	8	25·4	23·70	172	107
D Hull (Springhead)	W. D. Bingham, Esq.	5	1 0	16	25·5	25·02	178	117
D Cottingham (Waterworks)	W. D. Bingham, Esq.	5	1 0	26	24·3	25·70	175	107
D Holme-on-Spalding Moor	C. J. Pybus, Esq.	8	1 0	30	25·9	27·20	171	129
D Beverley (E. Riding Mental Hosp.)	Medical Superintendent	5	1 0	175	26·5	28·09	163	110
Beverley (New Walk)	W. Evans, Esq., C.E.	5	3 0	38	26·9	27·29	178	118
Beverley (Hull Bridge)	F. J. Affleck, Esq.	5	2 6	11	24·9	25·30	172	117
D Market Weighton (Dalton Holme)	J. P. Jobling, Esq.	8	6 0	120	27·3	27·01	169	121
D Brandesburton (Hempholm Lk.)	F. J. Affleck, Esq.	5	2 6	11	24·6	25·09	138	115
D Driffield (Council School)	The Headmaster	5	1 0	69	27·2	25·67	142	94
D Lowthorpe (The Elms)	F. K. Hawes, Esq.	5	1 0	63	26·5	24·53	183	118
4.—EAST COAST STREAMS. 171 sq. mi.								
D Bridlington (Corpn. Nurseries)	Parks Superintendent	5	1 0	60	25·6	23·92	183	110
D Bridlington (Grammar School)	The Headmaster	8	1 0	76	..	22·79	167	104
d Burton Fleming (Council School)	The Headmaster	5	0 4	128	27·3	21·99	..	105
M Ganton (Willerby Wold)	Major W. F. Wormald	5	1 2	565	..	24·94	..	..
D Filey Vicarage	Rev. Canon A. N. Cooper	8	1 0	96	24·8	21·60	174	125
NORTH RIDING. (Area, 2,155 sq. mi.).								
1.—OUSE—Ure. 273 sq. mi.								
D West Tanfield Rectory	Mr. H. H. Milman	5	1 0	150	28·7	26·61	148	107
D Masham Moor (Roundhill Res.)	A. S. West, Esq., C.E.	8	1 0	743	37·6	34·19	214	137
Masham Moor (Somerside)	H. Shortreed, Esq.,	5	0 9	928	38·8	33·12	162	140
Masham Moor (High Sour Mire)	H. Shortreed, Esq.,	5	0 9	884	31·2	30·28	..	..
Masham Moor (Leighton Res.)	H. Shortreed, Esq.,	5	0 9	634	35·9	29·96	176	121
Masham Moor (Towler Hill)	H. Shortreed, Esq.,	8	0 9	820	36·7	31·26	199	125
Masham Moor (Breary Bank)	H. Shortreed, Esq.,	5	0 9	600	36·8	32·96	205	127
Masham Moor (Healey Pasture)	H. Shortreed, Esq.,	5	0 9	620	36·1	31·59	204	125
Masham Moor (Low Houses)	H. Shortreed, Esq.,	5	0 9	693	37·9	32·82	201	140
D Clifton Castle Gardens	Lady Cowell	5	1 0	360	29·9	27·38	136	103
Middleham (Cotescue)	A. Rowntree, Esq.	5	1 0	600	..	26·62	152	107
D Middleham (Castle Hill)	C. T. Dixon-Johnson, Esq.	5	1 0	470	31·7	27·39	165	103
D West Burton (Flanders Hall)	G. T. Whitehead, Esq.	5	2 2	520	..	29·66	178	135

DIVISION IX—YORKSHIRE—(*con.*).

STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
NORTH RIDING—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
1.—OUSE—Ure—(*con.*).								
D West Witton (Ivy House)	J. B. Espiner, Esq.	5	1 0	605	34·1	30·65	174	133
d Leyburn (Spennithorne)	F. M. Curtis, Esq.	5	1 0	416	..	26·99	..	..
D Leyburn (Bolton Hall)	Mr. F. Scrivener	8	1 0	420	32·6	29·00	179	122
D Hawes Junction (Moorland Cott.)	W. Garnett, Esq.	5	1 6	1125	..	47·98	174	146
2.—OUSE—Swale. 569 sq. mi.								
D Dalton Parsonage	Rev. G. H. Chilman	5	1 0	79	23·0	22·58	157	102
d Coxwold (The Old Hall)	H. Geipel, Esq.	4	1 6	260	26·1	27·81	..	121
d Thirsk (Sowerby)	Mrs. W. Brown	5	0 11	110	24·7	23·42	..	..
D Thirsk (Brynkellhow)	The late A. B. Hall, Esq.	8	1 0	115	24·6	24·69	159	107
D Thirsk (Stoneybrough)	T. J. Foggitt, Esq.	5	1 2	122	24·7	24·89	163	104
M Felixkirk (Thirlby)	A. J. Walker, Esq.	5	1 0	339	27·1	26·76	..	..
D Felixkirk (Mount St. John) (+A)	A. J. Walker, Esq.	5	1 0	541	25·8	29·03	171	124
D Felixkirk (Mount St. John)	A. J. Walker, Esq.	5	1 0	541	26·5	28·78	171	124
D Bedale (Snape School)	The Headmaster	5	1 0	145	..	24·48	154	99
D Boltby (Ravensthorpe Manor)	F. E. Walker, Esq.	5	1 7	661	27·4	30·13	151	124
M Boltby, East	A. J. Walker, Esq.	5	1 0	460	26·2	29·05	..	..
M Boltby (High Paradise)	A. J. Walker, Esq.	5	1 3	1144	32·8	33·43	..	..
D Bedale (The Hermitage)	C. Clarke, Esq., F.S.I.	5	0 10	465	26·3	25·31	145	105
D Maunby Hall	Major A. Hill-Walker, V.C.	5	1 0	90	23·9	24·17	140	113
D Scruton Hall	A. Coore, Esq.	5	1 6	100	23·8	20·64	153	105
M Swaledale (Gunnerside Lodge)	W. M. Christy, Esq.	5	1 0	900	47·8	34·57	..	..
D Northallerton (Brompton)	J. P. Yeoman, Esq.	5	1 0	150	23·7	25·06	176	114
Osmotherly (Oakdale W.W.)	Northallerton U.D.C.	5	1 0	600	..	29·78	..	..
D Catterick (Aerodrome) (+A)	Meteorological Officer	8	1 0	176	..	21·63	161	98
D East Harlsey (Harlsey Hall)	Mrs. Constantine	5	1 0	370	..	26·63	138	116
d Richmond (C.E. School)	R. Hornby Esq.,	5	1 0	430	..	22·48	..	..
d Reeth (Arkengarthdale)	Samuel Gott, Esq.	5	1 0	940	41·0	(33·55)	(146)	(128)
W Middleton Tyas	Mrs. Baker-Baker	5	0 10	380	25·7	23·42	..	..
3.—OUSE—Left Bank Tributaries. 153 sq. mi.								
D York (Museum Gardens)	The Yorks. Phil. Soc. (Dr. W. L. Collinge)	5	1 0	57	24·3	23·02	153	107
d Stockton-on-Forest (Stockton Hall)	Mrs. Lloyd	5	1 1	30	21·5	20·40	..	..
Haxby (Moorlands)	E. G. Tew, Esq.	6	1 6	59	24·1	24·57	..	..
4.—OUSE—Derwent. 509 sq. mi.								
D Welburn	R. Child, Esq.	5	1 0	190	26·1	27·18	202	118
D Malton (Broughton Rise)	C. C. Laverack, Esq.	5	1 0	164	25·5	26·05	167	116
D Terrington (The Cliff)	Sir Alfred Lascelles	5	1 0	340	..	27·74	151	118
D Hovingham Hall	Capt. W. A. Worsley	5	0 9	119	29·0	32·88	177	139
D Ampleforth Abbey (*new site*)	Rev. E. O. Vanheems, O.S.B.	5	1 0	313	..	31·55	173	126
D Oswaldkirk (Leyesthorpe Hall)	Major G. B. Foster	5	1 0	231	..	28·32	151	119
D Helmsley (Boys' School)	E. W. Williams, Esq.	5	1 0	225	..	32·46	206	135
D Pickering (Hungate Hall)	Dr. J. L. Kirk	5	3 0	90	26·8	27·33	191	128
D Seamer (Irton Pump Station)	J. Paton Watson, Esq., C.E	8	1 0	94	28·7	24·18	165	116
D Scarborough (Osgodby)	J. Paton Watson, Esq., C.E.	8	1 0	166	26·1	22·90	204	115
D East Ayton (Derwent House)	A. H. Robinson, Esq.	5	1 0	110	27·0	25·53	171	133
D Kirkby Moorside (Ravenswyke)	Capt. V. H. Holt, M.C., J.P.	5	1 0	270	27·2	29·49	162	131
d Thornton Dale (High Dalby Ho.)	J. A. Coulson, Esq.	5	1 0	325	..	26·40	..	..
5.—ESK & C. 278 sq. mi.								
D Scarborough	Medical Officer of Health	5	1 1	118	25·8	20·43	166	114
D Scarborough (Scalby)	Capt. W. H. L. Wordsworth	5	1 0	210	..	24·18	180	123
D Scarborough (Scalby, St. Philips)	The late Rev. W. E. Stewart	5	1 0	130	26·1	21·58	172	114
d Cloughton (Cober Hill)	Yorkshire Guest House, Ltd.	5	1 0	250	..	23·56	..	109
D Egton Bridge (Bridgeholme)	Lt.-Col. R. Astley Smith	5	1 0	150	33·3	33·02	160	122
d Glaisdale (The Gables Gardens)	Mr. G. Horton	5	0 9	400	35·6	(31·11)	(144)	(124)
D Sleights (The Hall)	P. M. Horsfall, Esq.	5	1 0	220	30·7	27·83	150	113
D Danby (The School House)	J. W. Lynas, Esq.	5	1 0	500	35·2	34·82	177	138
D Castleton	Miss M. H. Punch	5	1 0	450	..	32·36	193	124
d Danby Lodge	Head Gardener	5	1 0	500	35·6	33·54	..	135

DIVISION IX—YORKSHIRE—(*con.*).

STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
NORTH RIDING—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
5.—ESK & C.—(*con.*).								
D Whitby (Park Hall, Aislaby)	Rev. J. H. Richardson	5	1 0	500	30·7	28·41	185	132
D Whitby (Pannett Park)	The Publicity Manager	8	1 0	122	..	22·82	140	111
D Whitby (Westthorpe)	Rev. M. A. C. Horsfall	6	1 6	120	..	25·83	173	129
D Whitby (Mulgrave Castle)	Mr. J. Corbett	5	1 0	410	29·1	27·53	181	113
D Guisborough (Lockwood Res.)	Cleveland Water Co.	8	1 0	632	33·0	32·41	212	145
D Saltburn (Skelton Castle)	Col. W. H. A. Wharton	5	0 9	272	28·1	26·80	207	140
6.—TEES. 373 sq. mi.								
D Ingleby Manor	Lord DeL'Isle & Dudley	5	1 2	460	33·9	(30·49)	173	122
D Kildale Hall	Major R. B. Turton	5	1 2	600	35·5	35·66	191	136
D Crathorne Hall Gardens	J. L. Dugdale, Esq.	5	1 3	107	25·0	24·44	163	116
D Barningham Park	Sir F. Milbank, Bart.	8	1 0	700	32·6	28·76	202	134
D Nunthorpe (The Box)	G. D. Cochrane, Esq.	5	1 0	287	25·2	28·19	176	128
d Marton-in-Cleveland (Southleigh)	Miss H. D. Wilson,	5	0 11	100	24·2	26·39	..	120
D Marton-in-Cleveland (Gartheen)	G. R. Collinson, Esq., C.E.	5	1 0	160	23·5	25·93	172	124
D Middlesbrough (Albert Park)	R. Sutcliffe, Esq.	5	1 0	30	23·7	23·59	164	114
M Baldersdale (Aygill)	G. R. Collinson, Esq., C.E.	5	1 0	1250	45·0	41·00	..	..
D Lartington Filters	G. R. Collinson, Esq., C.E.	5	1 0	725	30·2	26·94	175	133
M Baldersdale (Blackton Res.)	G. R. Collinson, Esq., C.E.	5	1 0	937	40·5	37·40	..	..
M Baldersdale (Balderhead)	G. R. Collinson, Esq., C.E.	5	1 0	1360	45·7	41·40	..	..
D Baldersdale (Hury R.) *old g site*	G. R. Collinson, Esq., C.E.	5	1 0	866	36·0	30·61	197	141
D Baldersdale (Hury R.) *new g site*	G. R. Collinson, Esq., C.E.	5	1 0	862	37·3	31·36	197	142
M Lunedale (Dow Crag)	G. R. Collinson, Esq., C.E.	5	1 0	1720	56·0	50·70	..	..
M Lunedale (Lunehead)	G. R. Collinson, Esq., C.E.	5	1 0	1450	55·6	48·20	..	..
M Lunedale (Selset)	G. R. Collinson, Esq., C.E.	5	1 0	924	40·8	34·90	..	..
D Lunedale (Grassholme Res.)	G. R. Collinson, Esq., C.E.	5	1 0	936	39·7	32·01	178	151
M Lunedale (Keekham)	G. R. Collinson, Esq., C.E.	5	1 0	1660	59·5	53·10	..	..
M Lunedale (Hargill)	G. R. Collinson, Esq., C.E.	5	1 0	1320	53·4	43·00	..	..

DIVISION X—NORTHERN COUNTIES.

DURHAM. (Area, 1,011 sq. mi.).

1.—TEES & C. 396 sq. mi.								
D Darlington (South Park)	T. J. Morrison, Esq.	5	1 0	150	27·1	22·39	179	100
D Darlington (Broken Scar)	G. R. Collinson, Esq., C.E.	5	1 0	158	26·2	22·77	158	109
D Darlington (Stanhope Road)	Rev. A. W. M. Close	5	1 0	180	27·2	23·86	174	109
D Darlington (Fighting Cocks Res.)	G. R. Collinson, Esq., C.E.	5	1 0	150	25·2	22·80	164	108
D Egglescliffe	G. C. Jones, Esq.	8	1 2	100	24·0	24·66	173	111
D Whorlton Vicarage	Rev. E. E. Gleaves	5	1 0	400	25·7	23·15	170	119
D Piercebridge (Carlbury Hall)	J. H. Pease, Esq.	5	1 0	222	26·3	22·78	175	105
D Gainford	H. L. Fife, Esq.	5	1 0	260	26·3	25·40	159	110
D Barnard Castle (Bowes Museum)	S. E. Harrison, Esq.	6	1 0	500	30·4	(26·54)	190	117
D Barnard Castle (County School)	The Bursar	5	1 6	540	29·1	26·12	193	122
D Long Newton Reservoir	G. R. Collinson, Esq., C.E.	5	1 0	184	25·5	23·59	175	118
D Stockton-on-Tees (Hartburn Lo.)	C. Nielson, Esq.	5	0 10	45	24·4	24·26	180	123
d Stockton-on-Tees (Ropner Park)	W. A. Jenkins, Esq.	5	1 9	61	22·9	21·93	..	..
D Stockton-on-Tees (Billingham)	I.C.I. (Fert. & Syn. Prod.) Ltd.	5	1 6	35	23·3	20·96	169	107
D Billingham U.D.C. .....(+A).	The Engineer & Surveyor ..	8	1 0	58	..	21·32	161	104
D Staindrop (Raby Castle) *old g*	Lord Barnard	5	1 0	450	28·5	27·92	190	128
D Staindrop (Raby Castle) *new g*	Lord Barnard	5	1 0	450	27·6	27·79	206	129
d Stillington Park	Messrs. Dorman Long & Co. Ltd.	5	1 0	140	27·1	28·45	..	..
d Eggleston House	The Headmaster	5	1 0	800	34·1	(27·58)	..	..
d Middleton-in-Teesdale School	The Headmaster	5	1 0	740	35·9	29·77	..	..
D Middleton-in-Teesdale (Newbiggin) *new g*	R. Coggins, Esq.	5	1 0	1000	40·8	38·57	202	159
D Hurworth Burn (Crookfoot Res.)	J. R. Bradshaw, Esq.	10	1 6	296	25·4	21·72	182	106
d West Hartlepool (Waterworks)	J. R. Bradshaw, Esq.	10	1 0	35	24·7	21·27	..	..
D Hurworth Burn Reservoir	J. R. Bradshaw, Esq.	10	1 0	357	26·5	21·70	189	104
D Hartlepool (Hart Reservoir)	J. R. Bradshaw, Esq.	10	1 0	172	..	21·31	188	103
D Shotton (New Winning P. S.)	A. B. E. Blackburn, Esq., C.E.	8	1 0	402	29·4	23·54	183	125
D Easington (Mill Hill Res.)	A. B. E. Blackburn, Esq., C.E.	8	1 0	521	..	24·35	191	124
D Seaham (Dalton Pumping Sta.)	A. B. E. Blackburn, Esq., C.E.	8	1 0	345	27·0	24·93	189	133

DIVISION X—NORTHERN COUNTIES—(*con.*).

STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Aver-age Rain-fall.	1933. Rain-fall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
DURHAM—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
2.—WEAR. 464 sq. mi.								
Wolsingham (Dryderdale)	Mrs. Cranston	5	1 3	700	..	27·21	..	..
d Stanhope (Parson Byers Qy.)	Messrs. Dorman Long & Co., Ltd.	5	6 8	846	31·7	(31·14)	..	..
M Burnhope (Grass Meres)	H. Robinson, Esq., C.E.	5	1 3	1850	59·1	42·30	..	..
M Burnhope (Lodgegill Mine)	H. Robinson, Esq., C.E.	5	1 3	1950	61·4	47·35	..	..
D Burnhope Bridge	H. Robinson, Esq., C.E.	8	1 0	1160	..	40·75	225	163
M Cowshill (Wellheads Hush)	H. Robinson, Esq., C.E.	5	1 6	1690	52·7	41·45	..	..
D Durham (HOUGHALL Hort. Sta.)	County Education Com.	5	1 0	160	27·9	24·89	156	112
D DURHAM	Univ. Obsy. (F. Sargent)	8	1 0	336	34·6	24·38	179	119
D Weardale W.W. (Tunstall Res.)	H. Robinson, Esq., C.E.	8	1 2	724	32·4	31·61	182	139
D USHAW (COLLEGE)	The Headmaster	5	1 0	594	28·2	29·65	170	132
M Weardale W.W. (Waskerley 6)	H. Robinson, Esq., C.E.	8	1 0	1229	..	29·19	..	..
M Weardale W.W. (Waskerley 3)	H. Robinson, Esq., C.E.	8	1 0	1433	..	31·38	..	..
D Weardale W.W. (Waskerley)	H. Robinson, Esq., C.E.	8	1 0	1179	33·1	32·43	195	153
M Weardale W.W. (Waskerley 1)	H. Robinson, Esq., C.E.	8	1 0	1317	..	30·52	..	..
D Consett (Crookhall)	H. Shackleton, Esq.	5	1 0	642	..	26·24	165	132
D Ryhope Pumping Station	A. B. E. Blackburn, Esq., C.E.	8	1 1	228	25·4	24·73	171	123
Washington School	V. Parkin, Esq.	5	1 2	160	..	22·02	..	..
D Sunderland (W. Hendon H.) No. 5	Mrs. W. A. Mounsey	5	1 0	130	25·6	26·27	185	116
D Sunderland (Mowbray Pk.) (+A)	Medical Officer of Health	5	1 0	105	25·6	22·73	167	121
3.—TYNE, LOWER. 151 sq. mi.								
D Weardale W.W. (Hisehope Res.)	H. Robinson, Esq., C.E.	5	1 0	1450	..	31·53	206	143
D Weardale W.W. (Smiddy Shaw)	H. Robinson, Esq., C.E.	8	1 3	1128	34·1	31·25	196	147
D Consett Park Farm	T. Hutton, Esq., C.E.	8	1 0	630	..	28·35	174	127
D Rowlands Gill (CHOPWELLWOOD)	Forestry Commission	8	1 0	446	28·7	24·15?	181	113
D Sunderland (Cleadon Pump. Stn.)	A. B. E. Blackburn, Esq., C.E.	8	1 0	216	24·4	21·81	185	113
D South Shields (Bent's Park)	Dr. W. Campbell Lyons	5	1 0	36	24·2	25·54	195	129
D South Shields (South Pier Wks.)	R. F. Hindmarsh, Esq., C.E.	5	1 0	17	..	21·04	169	110
NORTHUMBERLAND. (Area, 2,015 sq. mi.).								
1.—EDEN. 20 sq. mi.								
2.—SOUTH TYNE. 232 sq. mi.								
d Allenheads	J. W. Metcalfe, Esq.	8	1 0	1350	..	37·06	..	..
3.—TYNE, LOWER. 227 sq. mi.								
D Corbridge (Howden Dene)	T. D. Straker-Smith, Esq.	5	1 0	200	27·3	26·74	200	136
D Newcastle (Leazes Park)	W. J. Steele, Esq.	5	1 0	255	26·4	(25·48)	167	119
D Newcastle (Deaf & Dumb Inst.)	The Superintendent	5	1 8	201	24·7	23·52	157	103
D Newcastle (R. Grammar Sch.)	The Headmaster	5	0 11	167	..	22·57	176	114
D Hexham (Causey Hill)	R. W. Gregory, Esq.	5	1 2	430	..	22·59	187	129
d Hexham (Beaufront Castle)	The Lady Rayleigh	8	1 0	450	27·6	22·40	..	117
D Wallsend (Carville School)	E. L. Strong, Esq.	5	1 3	100	..	22·97	182	120
D Tynemouth (Tyne Pier Works)	R. F. Hindmarsh, Esq., C.E.	5	1 0	54	25·1	23·43	174	116
D TYNEMOUTH (C.G. Sta.) *new g.*	Chief Officer (M.O.)	8	1 0	108	24·5	24·55	192	127
D Whittle Dene Filters (N'stle W.W.)	A. Hardcastle, Esq., C.E.	5	1 1	353	26·6	25·89	207	139
D Whittle Dene Res. (Newc. W.W.)	A. Hardcastle, Esq., C.E.	5	0 6	380	25·3	26·02	205	137
4.—NORTH TYNE. 433 sq. mi.								
Ryal Cottage (Newcastle W.W.)	A. Hardcastle, Esq., C.E.	10	0 9	463	29·1	25·79	..	..
Hallington Vill. (N'castle W.W.)	A. Hardcastle, Esq., C.E.	5	1 0	467	29·9	25·74	..	..
D Hallington Res. (N'castle W.W.)	A. Hardcastle, Esq., C.E.	5	1 0	470	29·3	25·79	199	133
Hallington (Fawcett) (Newc. W.W.)	A. Hardcastle, Esq., C.E.	5	1 2	537	28·2	26·03	..	..
Hallington (Cheviott) (Newc. W.W.)	A. Hardcastle, Esq., C.E.	5	1 2	576	27·8	25·28	..	..
Camphill (Newcastle W.W.)	A. Hardcastle, Esq., C.E.	5	1 0	650	29·4	26·29	..	..
D Colt Crag Res. (N'castle W.W.)	A. Hardcastle, Esq., C.E.	5	1 0	654	..	26·28	193	134
Green Crag (Newcastle W.W.)	A. Hardcastle, Esq., C.E.	5	1 0	900	30·4	28·68	..	..
D BELLINGHAM (Highgreen)	Sir C. Morrison-Bell, Bt.	5	1 0	849	35·4	25·45	198	135
D Redewater (Catcleugh)	A. Hardcastle, Esq., C.E.	5	1 0	819	40·2	33·19	232	149
5.—COQUET & C. 840 sq. mi.								
Whittington (Newcastle W.W.)	A. Hardcastle, Esq., C.E.	8	0 9	528	28·1	23·58	..	..
Burnside (Newcastle W.W.)	A. Hardcastle, Esq., C.E.	5	0 9	419	27·2	24·64	..	..
d Kirkwhelpington	J. R. Wardle, Esq.	5	1 3	581	..	26·86	..	118
D Morpeth (High Stanners)	R. Matheson, Esq., Jnr.	8	1 0	90	..	25·34	191	131
D Ashington (Bothal School)	J. Gray, Esq.	5	8 0	110	25·3	21·58	183	118

DIVISION X—NORTHERN COUNTIES—(*con.*).

	STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
	NORTHUMBERLAND—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*			
	5.—COQUET & C.—(*con.*).								
D	Morpeth (Cockle Park)	Northumberland Co. Council	8	1 0	325	29·3	24·63	188	127
D	Font Res. (Tynemouth W.W.)	J. W. McKerrow, Esq.	10	1 2	620	31·1	26·63	218	138
W	Long Framlington (Embleton H.)	J. C. Fenwick, Esq.	5	0 9	430	30·3	27·59	..	..
d	Acklington (Broomhill Colliery)	A. M. Morison, Esq.	5	1 0	92	24·9	26·14	..	..
D	Rothbury (Heatherlea)	J. H. Holmes, Esq., C.E.	5	1 0	460	..	25·95	183	131
D	Callaly Castle Gardens	E. J. Farmer, Esq.	5	1 0	300	..	28·39	174	133
D	Alnmouth (Nether Grange)	Miss E. Pease, J.P., O.B.E.	5	1 6	40	26·2	24·34	153	115
D	Howick Hall Gardens	Earl Grey	10	1 0	110	..	25·12	190	135
D	Chathill (Preston Tower)	G. G. Baker Cresswell, Esq.	8	1 0	140	28·3	24·38	146	120
D	Belford (Newlands)	C. H. Sanderson, Esq.	5	3 10	130	..	23·45	174	121
	6.—TWEED. 262 sq. mi.								
D	Wooperton	Mrs. Burdon	6	1 6	..	30·0	27·82	162	131
D	Kirknewton (Coldburn)	Mrs. A. Cowe	5	0 9	790	..	37·26	173	132
D	Ilderton (Lilburn Tower Gdns.)	Mr. W. Lovett	5	1 0	250	30·4	28·26	193	135
d	Wooler (Victoria House)	Miss E. M. Dodds	5	1 0	176	26·8	24·88	..	..
	Mindrum (Thornington House)	Leonard Briggs, Esq.	5	..	..	28·6	27·41	..	..
D	Berwick-on-Tweed (Ramparts)	Borough Surveyor	5	1 0	76	23·4	19·59	147	113
	7.—INSULAR. 1 sq. mi.								
	CUMBERLAND. (Area, 1,516 sq. mi.)								
	1.—EDEN & SOLWAY. 887 sq. mi.								
D	Ullswater (Hallstcads)	Mrs. F. Thomasson	5	1 0	497	54·7	42·80	183	142
D	Watermillock (Gatesgarth)	Mrs. Spring-Rice	5	1 3	874	..	39·66	187	145
D	Penrith (Hutton John)	F. Huddleston, Esq., C.E.	5	1 0	688	45·1	36·71	185	134
W	Threlkeld (Skiddaw Ho.)	J. Robinson, Esq.	5	1 6	1480	..	52·30	..	..
D	Penrith (Laurel Bank)	A. B. Sinclair, Esq.	5	1 0	480	36·4	26·93	176	126
D	Penrith (Newton Rigg)	Cumberland County Council	8	1 0	560	36·4	26·31	182	122
D	Penrith (Nunwick Hall)	R. Heywood Thompson, Esq.	5	1 0	268	31·8	25·24	169	125
d	Troutbeck (Wellbank)†	Miss R. A. S. Streetfield	5	1 0	800	..	51·63	(178)	(148)
M	Allonby	W. H. Williamson, Esq., J.P.	5	1 0	25	..	21·00	..	..
D	Renwick (Ravenwood)	W. Salkeld, Esq.	5	1 0	750	40·0	35·21	191	159
D	Ainstable (Heather Glen)	A. Guthrie-Smith, Esq.	5	1 6	500	34·3	25·99	178	141
D	Wigton (Brookfield)	David W. Reed, Esq., B.Sc.	5	1 0	124	36·7	26·37	147	116
D	Wreay Vicarage	Rev. Canon A. R. Hall	5	1 0	310	31·5	24·85	189	116
D	Silloth	Miss A. P. Farries	5	1 0	27	..	23·92	135	108
D	Geltsdale	P. Dalton, Esq., C.E.	5	1 2	778	36·8	30·05	183	144
D	Carlisle (Spital Cemetery)	L. C. Collett, Esq.	8	1 0	114	31·8	22·80	173	118
	Carlisle (Denton Holme)	W. Eggleston, Esq.	5	1 0	57	30·1	22·34	..	..
D	Carlisle (Rose Hill)	Henry Lonsdale, Esq.	8	1 1	105	..	23·98	170	124
D	Carlisle (Scaleby Hall)	Lady Allison	5	1 0	111	33·7	24·23	167	117
	2.—DERWENT. 257 sq. mi.								
M	Sprinkling Tarn	T. Bainbridge, for M.O.	5	1 6	1985	131·8	(105·25)	..	..
M	Styehead Tarn	T. Bainbridge, for M.O.	5	1 6	1472	129·6	103·25	..	..
M	Stye Head A. *new g.*	T. Bainbridge, for M.O.	5	1 0	1100	..	100·25	..	..
M	Borrowdale (Stockley Bridge)	T. Bainbridge, for M.O.	5	1 0	585	..	96·00	..	..
	Borrowdale (Seathwaite) garden	T. Bainbridge, for M.O.	5	1 6	423	122·0	89·25	..	..
	Borrowdale (Seathwaite) field	Miss C. Marshall	5	1 0	423	122·4	88·25	..	..
M	Helvellyn (Hill Top Gill)	Manchester Corpn. W.W.	5	1 0	1050	..	75·71	..	..
M	Ullscarf	Manchester Corpn. W.W.	5	1 0	2100	..	76·48	..	..
M‖	Helvellyn (Birkside)	Manchester Corpn. W.W.	5	1 0	1900	..	71·67	..	..
M	Wythburn	Manchester Corpn. W.W.	5	1 0	610	99·6	72·53	..	..
M	Helvellyn (Brown Rigg) *new g.*	Manchester Corpn. W.W.	5	1 0	1450	..	84·69	..	..
D	Borrowdale (The Moraine)	G. Scott, Esq.	5	1 0	330	97·5	80·04	187	153
M	Helvellyn (Brown Cove)	Manchester Corpn. W.W.	5	1 0	2250	..	71·07	..	..
D	Watendlath Farm	W. Tyson, Esq., for M.O.	5	1 0	800	..	67·05	142	133
M	Armboth Fells (The Pewitts)	Manchester Corpn. W.W.	5	1 0	1650	..	76·29	..	..
M	Helvellyn (Whiteside), *new g.*	Manchester Corpn. W.W.	5	1 0	2100	..	69·70	..	..
D	Buttermere (Hassness)	E. Dixon, Esq.	6	1 0	350	105·9	71·87	173	153
M	Crummock Water (Lanthwaite Grn.)	R. W. Hall, Esq.	5	1 0	570	64·9	52·88	..	..
	Thirlmere (Dale Head Hall), *new g.*	Manchester Corpn. W.W.	6	1 0	620	..	65·45	..	..

† Station formerly called Caldbeck (Wellbank).

‖ Gauge removed to site selected after inspection and surrounded by a turf wall.

DIVISION X—NORTHERN COUNTIES—(*con.*).

	STATIONS.	AUTHORITIES.	Diam.	Rain-gauge Height of Rim above Ground.	Height of Ground above Sea Level.	Average Rainfall.	1933. Rainfall.	Days with ·01 in. or more.	Days with ·04 in. or more.
	CUMBERLAND—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
	2.—DERWENT—(*con.*).								
D	Cockermouth (Loweswater)	Miss S. H. Frith	5	1 0	353	..	46·38	174	142
D	Keswick (Lingholm Gardens)	J. Elson, Esq.	5	1 0	300	65·7	51·69	178	140
D	Keswick (Derwent Island) *old g*	The late C. E. Marshall, Esq.*	5	0 9	280	65·7	47·66	181	137
D	Keswick (Derwent Island) *new g.*	The late C. E. Marshall, Esq.*	5	1 0	290	57·0	44·65	180	138
D	KESWICK (High Hill)	Clerk to the U.D.C.	5	1 0	254	54·9	41·48	160	126
D	Portinscale (High Moss)	Mrs. J. E. Brown	5	1 0	285	61·9	43·64	182	137
D	Lorton (Kirkfell House)	R. Wigham, Esq.	5	0 5	403	..	34·34	178	136
D	Keswick (Mirehouse)	Miss Spedding	5	1 6	280	49·8	43·36	156	129
D	Workington (Stainburn Res.)	The Borough Surveyor	5	1 0	180	36·9	31·33	177	174
D	Threlkeld (Blencathra Sanat.)	Medical Superintendent	5	1 0	885	61·5	49·55	163	152
M	Cockermouth (Castlegate Drive)	R. W. Hall, Esq.	5	1 0	268	..	27·47	..	..
	Camerton Vicarage	Rev. E. C. Bennett	5	1 0	200	36·2	26·91	..	..
D	Bassenthwaite (Higham)	G. F. Fisher, Esq.	5	0 9	500	44·9	34·83	193	135
	3.—WEST COAST STREAMS. 235 sq. mi.								
D	Ravenglass (The Grove)	Walter Marchant, Esq.	5	1 0	70	42·5	34·10	156	135
D	Eskdale Green (Gatehouse)	Mr. E. Hayes	5	1 0	250	..	44·07	171	146
D	Beckfoot (Eskdale Vicarage)	Mrs. F. K. Berry	5	1 0	169	..	53·48	179	155
	Braystones	H. H. Watson, Esq.	10	3 6	36	37·5	31·52	..	..
d	St. Bees (Eaglesfield)	S. T. Aston, Esq.	5	1 0	50	..	30·16	(151)	(129)
D	St. Bees (Fern Bank)	Lt.-Col. G. Dixon	5	1 0	60	42·7	31·82	163	129
D	Whitehaven (Stanley Pond)	The Priestman Whiteh'n Colls. Ltd.	12	2 11	45	47·5	35·71	155	124
D	Whitehaven (Scragill Reservoir)	A. Wilson, Esq., C.E.	8	1 0	188	43·5	36·12	175	129
	4.—DUDDON & C. 50 sq. mi.								
	5.—SOUTH TYNE. 87 sq. mi.								
D	Alston Vicarage	Rev. N. A. Walton	5	1 0	940	..	37·61	193	164
	WESTMORLAND. (Area, 783 sq. mi.)								
	1.—EDEN. 373 sq. mi.								
	Kirkby Stephen (Eden Place)	Mrs. Paul Mason	5	1 0	544	42·3	31·10	178	126
	Wasdale Pike	Manchester Corpn. W.W.	5	1 0	1825	..	59·33	..	..
	Mosedale (Mosedale Cottage)	Manchester Corpn. W.W.	5	1 0	1443	87·8	72·37	..	..
	Wet Sleddale (Mirethwaite)	Manchester Corpn. W.W.	5	1 0	990	64·7	48·88	..	..
	Blea Water	Manchester Corpn. W.W.	5	1 0	1465	..	80·59	..	..
M	Blea Water B.	Manchester Corpn. W.W.	5	1 0	1420	..	85·05	..	..
	Mardale (Grove Brae)	Manchester Corpn. W.W.	5	1 0	802	..	60·81	..	..
	Shap (Birkbeck Fell)	Manchester Corpn. W.W.	5	1 0	935	56·0	43·21	..	..
	Swindale Parsonage	Manchester Corpn. W.W.	5	1 0	875	..	55·13	..	..
	Grisedale (Ruthwaite Lodge)	M. Marshall, Esq.*	8	1 6	1250	97·7	(70·27)	..	..
	Mardale (Low Raise)	Manchester Corpn. W.W.	5	1 0	2465	..	68·81	..	..
	Shap (Thornship Gill)	Manchester Corpn. W.W.	5	1 0	865	51·4	44·93	..	..
	Shap (Tailbert Head)	Manchester Corpn. W.W.	5	1 0	1100	55·6	42·41	..	..
	Hawes Water (Boulderstone Nib)	Manchester Corpn. W.W.	8	1 0	744	..	60·90	..	..
M	Hawes Water (Naddle Head)	Manchester Corpn. W.W.	5	1 0	1150	..	56·56	..	..
M	Hawes Water (Wallow Crag)	Manchester Corpn. W.W.	5	1 0	1250	..	58·03	..	..
M	Hawes Water (Naddle House)	Manchester Corpn. W.W.	5	1 0	825	60·5	53·37	..	..
	Hawes Water (Measand)	Manchester Corpn. W.W.	5	1 0	824	69·6	56·14	..	..
	Measand Beck (Keasgill)	Manchester Corpn. W.W.	5	1 0	1862	..	69·91	..	..
M	Hawes Water (Thornthwaite Pk.)	Manchester Corpn. W.W.	5	1 0	650	..	50·42	..	..
M	Hawes Water (Burn Banks)	Manchester Corpn. W.W.	5	1 0	900	..	55·20	..	..
D	Patterdale Hall	M. Marshall, Esq.*	5	1 3	490	86·4	63·64	181	151
d	Patterdale (Greenside Mine)	Matthew Place, Esq.	7	1 6	1005	91·9	68·06	..	..
	Bampton (Low Kop)	Manchester Corpn. W.W.	5	1 0	1876	..	44·46	..	..
M	Bampton (Low Kop) B.	Manchester Corpn. W.W.	5	1 0	1750	..	58·12	..	..
	Bampton (Walmhow)	Manchester Corpn. W.W.	5	1 0	615	46·5	46·31	..	..
	Bampton (Stanegarth)	Manchester Corpn. W.W.	5	1 0	913	59·5	46·32	..	..
M	Cawdale Beck (Howe Grain)	Manchester Corpn. W.W.	5	1 0	1642	..	56·70	..	..
	Heltondale (Kidmoor)	Manchester Corpn. W.W.	5	1 0	984	..	45·91	..	..
D	APPLEBY (Castle Bank)	Lady Holmes	5	1 0	440	35·0	29·62	197	146
	Ullswater (Sharrow Bay)	Mr. G. Robinson	5	1 0	600	45·8	39·12	..	..

* *Per* Miss Cordelia Marshall.

DIVISION X—NORTHERN COUNTIES—(*con.*).

	STATIONS.	AUTHORITIES.	Diam.	Rain-gauge Height of Rim above Ground.	Rain-gauge Height of Ground above Sea Level.	Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
	WESTMORLAND—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
	1.—EDEN—(*con.*).								
D	Morland	F. R. Markham, Esq.	5	1 0	455	35·6	29·24	166	130
	Morland Hall	W. G. Shorrock, Esq.	5	1 0	475	..	25·76	..	..
D	Penrith (Lowther Castle)	Mr. J. Jeffrey	5	1 0	760	41·8	34·61	177	138
D	Cliburn (Council School)	L. S. Chapman, Esq.	5	1 0	420	..	25·37	130	113
D	Penrith (Barton House)	Mrs. Legh Tolson	5	1 0	500	42·4	32·79	178	135
D	Temple Sowerby (The Grange)	Col. E. B. Burton	5	1 1	370	30·7	24·12	179	123
	2.—LEVEN. 60 sq. mi.								
D	Bowness (Dawstone)	J. Morton, Esq.	5	1 2	550	62·9	45·04	188	144
D	Windermere (Nurseries)	The Lakeland Nurseries, Ltd.	5	1 5	350	..	44·72	165	139
D	Windermere (St. Rule)	Miss E. M. Bullock	5	1 0	350	..	42·89	184	146
D	Windermere (Hammar Bank)	Mrs. H. Coutts	5	1 0	200	61·4	44·55	182	143
D	Windermere (Holehird)	H. L. Groves, Esq.	5	1 0	483	68·0	49·16	222	155
D	Windermere (Brockhole)	W. Gaddum, Esq.	5	1 6	175	66·3	45·28	179	140
D	Ambleside (Wansfell)	Miss Wrigley	8	1 0	150	71·9	51·75	178	147
M	Little Langdale (Fell Foot)	Miss C. Marshall	5	2 2	380	108·2	84·14	..	..
D	Ambleside (White Craggs)	C. H. Hough, Esq.	5	1 7	200	72·1	52·59	157	132
D	Ambleside (King's School)	The Headmaster	5	4 0	300	..	50·87	163	134
D	AMBLESIDE (U.D.C.)	The Surveyor	5	1 0	145	..	46·34	152	123
D	Ambleside (Market Square)	G. A. Johnston, Esq., M.D.	5	1 0	180	75·1	53·93	183	127
	Elterwater (Eltermere)	Miss C. Marshall	5	1 0	205	89·6	65·22	172	..
D	Ambleside (Lesketh How.)	Miss Benson		..	..	..	57·14	194	151
D	Rydal (The Stepping Stones)	Gordon G. Wordsworth, Esq.	5	1 3	190	80·6	59·82	186	154
D	Rydal (High Close)	F. E. T. Jones Balme, Esq.	8	0 9	553	83·3	(59·65)	176	143
D	Rydal (The Hall)	R. E. Porter, Esq.	5	1 0	354	82·1	60·73	197	154
d	New Dungeon Ghyll Hotel	Miss C. Marshall	5	1 1	310	110·2	(73·13)	(161)	(153)
	Mickleden	Miss C. Marshall	5	1 6	490	130·8	79·82	..	..
D	Grasmere (The Wray)	Miss G. M. Simpson	5	1 0	221	88·5	67·44	197	150
	3.—KENT. 188 sq. mi.								
D	Burton (Under Fell)	J. B. Hoyle, Esq.	5	0 9	225	42·3	32·01	170	126
D	Heversham (Plumtree Hall)	Miss M. C. Watson	5	0 8	115	45·7	34·00	182	126
D	Levens (Beathwaite)	Robert Bush, Esq.	5	1 0	105	..	35·69	188	134
D	Endmoor (Whinyeats)	H. Corder, Esq.	5	0 8	325	..	35·67	158	131
D	Killington Reservoir	L. M. & S. Railway	8	3 4	674	..	33·80	169	138
d	Underbarrow (Broad Oak)	Col. J. A. Jackson	5	1 0	100	..	(38·74)	(168)	(137)
D	Kendal Gasworks	Kendal Gas & Water Co.	5	1 7	140	..	33·59	158	128
D	Kendal (Southfield)	J. W. Braithwaite, Esq.	8	1 0	150	50·0	36·30	178	130
D	Kendal (Highgate)	R. Rhodes, Esq.	5	1 3	176	50·6	31·03	161	127
d	Kendal (Greenside)	Miss C. E. Wilson	5	1 0	380	53·0	39·21	(147)	(125)
D	Kendal (Fisher Tarn Res.) *new g., new site.*	Kendal Gas & Water Co.	5	1 0	742	..	38·77	189	139
D	Kendal (Ellergreen)	J. W. Cropper, Esq.	5	1 6	270	58·2	41·32	153	134
D	Kendal (Burneside)	W. E. Brown, Esq.	5	0 10	165	53·2	40·21	167	137
D	Kendal (Kent Lea)	R. J. Cragghill, Esq.	5	1 0	165	..	38·17	184	143
D	Kendal (Skelsmergh)	F. G. Linnell, Esq.	5	1 0	450	..	41·08	193	146
d	Kendal (Potter Fell)	J. Cropper & Co., Ltd.	5	2 0	750	70·6	(56·76)	(190)	(142)
	Troutbeck (Dubbs Reservoir)	J. Lupton, Esq.	5	1 3	745	..	(51·56)	..	..
D	Kentmere	J. Cropper & Co., Ltd.		..	..	..	70·46	184	164
D	Kentmere Head Reservoir	Kendal Res. Commissioners.	5	1 6	920	..	71·43	184	163
	4.—LUNE. 122 sq. mi.								
D	Kirkby Lonsdale (Stoop Lane)	Mrs. H. E. Hollins	5	1 8	210	..	33·80	166	135
D	Barbon Manor	Lord Shuttleworth	5	1 3	650	..	33·81?	165	137
D	Barbon (The Stores)	The Late W. Wilkinson, Esq.	5	1 0	310	46·6	32·33	184	125
	Ravenstonedale (Railway Station)	J. T. Sanderson, Esq.	5	1 0	800	..	37·07	..	..
	5.—TEES. 40 sq. mi.								
M	Lunedale (Conny Pot)	G. R. Collinson, Esq., C.E.	5	1 0	1840	53·7	49·50	..	..

DIVISION XI—MONMOUTH, WALES, AND THE ISLANDS.

MONMOUTH. (Area, 534 sq. mi.)

	1.—RHYMNEY. 39 sq. mi.								
d	Rumney (Witla Court)	Mr. E. Edwards	5	1 0	175	39·4	(30·09)	..	..
D	Machen (Machen Quarry)	Machen Quarries, Ltd.	5	1 1	250	..	35·75	155	128

DIVISION XI—MONMOUTH, WALES, AND THE ISLANDS—(*con.*).

STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Rain-gauge: Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
MONMOUTH—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
2.—EBBW. 88 sq. mi.								
D Rogerstone (Rhiwderin)	The late Sir L. Forestier-Walker, K.B.E.	5	1 3	250	..	33·57	139	116
D Rogerstone (Newport Golf Links)	Col. Blethyn T. Rees, C.E.	5	0 8	304	..	35·36	155	121
D Blackwood	D. H. Price, Esq.	5	0 10	630	..	32·57	159	122
D Abertillery (The Park)	S. E. Thomas, Esq.	5	1 0	700	57·2	44·28	161	131
d Tredegar Laboratory	Tredegar Iron & Coal Co. Ltd.	5	2 0	950	59·8	44·97	..	..
D Ebbw Vale (Iron Works)	Ebbw Vale Steel & Iron Co., Ltd.	8	1 0	902	56·6	41·81	161	133
3.—USK & C. 290 sq. mi.								
D Redwick	Col. Blethyn T. Rees, C.E.	5	1 3	24	..	23·98	125	104
D Portskewett (Sudbrook)	S. W. Moore, Esq., C.E.	8	1 0	51	..	22·67	124	104
D Newport (Stow Park)	A. W. Jupp, Esq., C.E.	5	1 0	200	..	31·30	155	120
D Newport (Hospital)	Medical Officer of Health	8	1 0	265	..	33·00	142	113
D Newport W.W. (Friar St. Yard)	Newport Corporation	5	6 0	32	..	29·20	140	108
D Newport W.W. (Ynis-y-fro Res.)	Newport Corporation	5	1 0	130	..	32·51	160	115
D Caerleon (The Croft)	Col. Blethyn T. Rees, C.E.	5	1 0	51	..	30·57	165	111
D Newport W.W. (Pant-yr-eos Res.)	Newport Corporation	5	1 0	485	..	33·49	159	117
D Newport W.W. (Llanvaches)	Newport Corporation	5	0 10	456	..	27·94	145	102
D Newport W.W. (Nantypridd)	Newport Corporation	5	1 0	500	..	30·43	144	108
D Chepstow (Itton Court)	Lady Curre	5	1 0	390	..	30·72	139	110
D Newport W.W. (Newchurch)	Newport Corporation	5	1 0	550	..	32·26	145	111
D Usk (Monmouth Agric. Instn.)	The Principal	5	1 0	70	..	29·45	123	105
D Abersychan (Glansychan)	G. W. James, Esq.	5	1 2	699	55·0	42·97	181	135
Goytre (Goytre Hall)	Mrs. Lionel Whitehead, O.B.E.	5	1 0	300	46·1	36·92	152	118
d Blaenavon (Estate Office)	E. J. John, Esq.	8	1 0	1144	55·1	49·20	..	..
D Abergavenny (Penpergwm)	Leslie R. Pym, Esq.	5	1 0	186	..	33·79	155	110
D Abergavenny (Plas Derwen)	Alan Whitehead, Esq.	5	1 3	200	..	36·81	162	120
D Abergavenny (Ty Clyd)	F. D. Llewelyn, Esq.	5	1 0	272	45·1	37·28	153	126
D Abergavenny (Richmond Road)	W. H. Edmunds, Esq.	8	1 0	256	40·6	33·47	150	116
D Abergavenny (Larchfield)	Dr. N. R. Phillips.	5	1 0	240	37·5	32·89	148	114
D Abergavenny (The Chain)	Miss Baker-Gabb	5	1 0	310	..	35·16	152	124
D Grwyne Fawr (Coed Dias)	Miss Baker-Gabb	5	1 0	900	..	35·86	167	134
4.—WYE. 117 sq. mi.								
D Monmouth (Cornwall House)	P. G. Harvey, Esq., M.D.	5	0 11	55	..	25·35	142	98
D Trewyn	Mr. R. F. Duncombe	5	0 10	500	..	33·21	149	128
D Grosmont	Miss D. K. Estcourt	5	1 0	420	..	30·40	170	115
GLAMORGAN. (Area, 808 sq. mi.)								
1.—LOUGHOR. 55 sq. mi.								
D Gorseinon (Penllergaer)	Sir C. Venables Llewelyn, Bt.	5	3 6	240	48·7	34·43	148	121
D Felindre (Blaenant Ddu)	Lt.-Col. F. Hibbert, C.E.	5	1 3	346	..	42·31	176	133
D Felindre (Lower Lliw Res.)	Lt.-Col. F. Hibbert, C.E.	8	1 3	426	..	39·47	175	128
D Felindre (Upper Lliw Res.)	Lt.-Col. F. Hibbert, C.E.	8	1 3	599	..	45·65	172	128
2.—GOWER PENINSULA. 62 sq. mi.								
D Gower (Penrice Castle)	Mr. George Miller.	5	1 6	18	..	35·82	164	128
d Penmaen (Cefn Mor)	Mrs. R. A. Bostock	5	1 6	300	41·5	30·16	..	120
D Clyne Castle	Adml. A. Walker-Heneage-Vivian	5	1 0	100	..	36·49	159	133
D Sketty (Rhydyrhelyg)	E. H. Perkins, Esq.	5	1 0	124	46·0	38·13	162	129
3.—TAWE. 47 sq. mi.								
D Swansea (Victoria Park) (+A)	The Town Clerk.	8	1 0	27	..	35·90	165	124
D Clydach (Wernfadog)	W. J. P. Player, Esq.	8	1 0	..	..	42·90	178	125
D Ystalyfera (Wern House)	Miss L. Williams.	5	1 6	240	64·8	53·21	143	126
4.—NEATH. 82 sq. mi.								
D Briton Ferry (Brynsiriol)	H. A. Clarke, Esq., C.E.	5	1 0	33	..	37·47	151	125
D Briton Ferry (Cefn Court)	H. A. Clarke, Esq., C.E.	5	1 0	503	47·7	38·04	157	127
D Neath (Cimla Reservoir)	H. A. Clarke, Esq., C.E.	5	1 0	360	..	40·20	152	124

DIVISION XI—MONMOUTH, WALES, AND THE ISLANDS—(*con.*).

	STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
	GLAMORGAN—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
	4.—NEATH—(*con.*).								
D	Neath (Gnoll Reservoir)	H. A. Clarke, Esq., C.E.	5	1 0	204	52·1	39·57	151	113
D	Neath (Farm School)	A. L. Brackey, Esq	5	1 0	200	..	37·37	146	118
D	Neath (Bryn-Teg)	H. P. Lloyd, Esq.	5	0 9	100	..	40·06	151	117
d	Neath (Glynfelin)	T. Gibbins, Esq.	5	1 4	180	..	41·69	..	117
D	Rhondda W.W.(Llyn Fawr Res.) (*old*)	J. B. Hughes, Esq.	8	1 0	1220	88·6	70·37	173	141
D	Rhondda W.W.(Llyn Fawr Res.) *new g*	J. B. Hughes, Esq.	5	1 0	1220	..	70·96	173	141
	Pontardawe (Plas Cilybebyll)	J. H. P. Lloyd, Esq.	5	1 3	500	..	50·22	..	..
	5.—OGMORE & C. 350 sq. mi.								
D	Barry (Porth-y-Castell)	E. Sawyer, Esq.	5	1 0	150	..	27·99	148	112
	Barry W.W. (Merthyr Dyfan R.)	T. E. Franklin, Esq., C.E.	5	1 0	300	37·6	34·02	..	..
	Lower Penarth	E. I. Evans, Esq., C.E.	5	1 0	66	34·9	27·32	125	109
	Penarth Cemetery	E. I. Evans, Esq., C.E.	5	1 4	99	..	29·33	136	113
	Penarth (Council Offices)	E. I. Evans, Esq., C.E.	5	5 0	160	37·1	29·40	139	109
D	Dunraven Castle	J. P. Maitland, Esq.	5	1 0	80	..	27·86	146	121
	Southerndown	E. Tudor Owen, Esq.	8	3 6	214	..	26·80	143	114
D	Cardiff (Cogan Pumping Statn.)	N. J. Peters, Esq., C.E.	5	1 0	117	37·7	31·36	141	117
D	Cardiff (Ely Pumping Station)	N. J. Peters, Esq., C.E.	5	1 0	53	42·1	29·57	180	134
D	Fairwater (Glan Ely Hosp.)	Medical Superintendent	5	1 0	122	..	27·43	134	99
	Barry W.W. (Pencoedtre Res.)	T. E. Franklin, Esq., C.E.	5	1 0	200	..	34·28	..	..
D	Cardiff (St. Fagans Castle)	Capt. H. A. Pettigrew	5	1 0	100	48·5	34·73	152	128
D	Cowbridge (Pentre Meyrick)	F. E. P. Dunn, Esq.	5	1 0	300	..	29·73	152	110
D	Merthyr Mawr	Col. J. I. D. Nicholl	5	1 6	75	42·9	33·31	198	151
D	Bridgend (Eiw Graig)	H. J. Randall, Esq.	8	1 6	50	..	32·09	161	119
D	Bridgend (Waterworks)	E. W. Davies, Esq.	5	1 0	140	..	31·67	140	112
d	Pencoed (Senior School)	G. H. Cornish, Esq.	5	1 3	200	..	35·03	..	..
	Pencoed (Brynna)	E. W. Davies, Esq.	12	2 6	172	..	33·07	..	..
D	Pencoed (Heol-y-Cyw Sch.)	W. Morgan-Richards, Esq.	5	1 0	330	..	37·12	143	127
D	Port Talbot (Twyn-yr-hydd)	E. N. David, Esq.	5	1 3	180	42·6	35·40	161	121
D	Port Talbot (Groeswen Ganol)	A. Bishop, Esq.	8	1 0	51	40·3	32·88	144	117
D	Maesteg (Isolation Hospital)	G. E. Howells, Esq.	8	0 10	700	..	48·17	163	147
D	Pontycymmer	E. W. Davies, Esq.	8	1 0	560	..	57·53	167	128
D	Pontycymmer (Garw Sec. Sch.)	J. J. Morgan, Esq.,	5	1 0	600	..	58·19	157	132
D	Ogmore Vale	E. W. Davies, Esq.	8	0 6	600	..	57·91	147	118
	6.—TAFF. 157 sq. mi.								
D	Cardiff (Trade Street Depot)	N. J. Peters, Esq., C.E.	5	1 0	45	39·5	31·10	148	120
D	Llandaff (West Hill)	J. E. Gladstone, Esq.	5	1 0	110	42·2	34·03	164	127
D	Rhubina Reservoir	N. J. Peters, Esq., C.E.	5	1 0	336	48·1	35·53	158	122
D	Pontypridd (Treforest Central Sch.)	The Headmaster	5	1 0	350	..	46·60	161	131
D	Pontypridd (Lan Wood R.) *new s*	The late H. E. Maltby, Esq., C.E.	5	1 6	300	..	43·86	153	131
D	Pontypridd (Llanfabon)	The late H. E. Maltby, Esq., C.E.	5	1 0	600	..	47·89	163	130
D	Ystradyfodwg (Tyntyla Hos.)	J. D. Jenkins, Esq., M.D.	5	1 0	590	60·1	39·22	161	132
d	Treharris Service Reservoir	A. J. Marshall, Esq., C.E.	5	1 3	765	52·3	38·41	..	123
D	Mountain Ash (Darranlas Res.)	W. G. Thomas, Esq., C.E.	5	0 11	540	63·0	47·30	165	131
D	Mountain Ash (Maesydderwen)	W. N. Morgan, Esq.	5	1 0	483	56·6	45·89	168	122
D	Treherbert (Tyn-y-waun) *old g*	O. Thomas, Esq.	5	1 0	801	87·0	67·96	176	138
D‖	Treherbert (Tyn-y-waun) *new g*	O. Thomas, Esq.	5	1 0	801	..	67·82	176	139
D	Rhondda (Castell Nos. Res.) *new g*	The late H. E. Maltby, Esq., C.E.	5	1 6	1060	..	62·39	162	139
D	Rhondda (Lluest Wen. Filter) *new g*	The late H. E. Maltby, Esq., C.E.	5	1 6	1200	..	59·64	164	132
D	Rhondda (Lluest Wen Res.)	The late H. E. Maltby, Esq., C.E.	5	1 6	1280	89·0	67·56	164	140
D	Merthyr Tydfil (Penybryn Filters)	A. J. Marshall, Esq., C.E.	5	1 3	937	54·0	42·04	180	133
D	Dowlais (Gwernllwyn)	The late C. C. Blower, Esq.	5	1 6	1071	51·4	37·97	152	116
D	Dowlais (Garth Filter Beds)	A. C. Quiningborough, Esq.	5	1 0	1245	..	45·93	172	127

‖ Turf wall round gauge.

DIVISION XI—MONMOUTH, WALES, AND THE ISLANDS—(*con.*).

	STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Rain-gauge: Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
			in.	*ft. in.*	*ft.*	*in.*	*in.*		
	7.—RHYMNEY. 55 sq. mi.								
D	Cardiff (Roath Park)	A. A. Pettigrew, Esq.	5	0 11	49	41·6	31·44	158	121
D	CARDIFF (Penylan) (+A)	Medical Officer of Health	5	1 0	202	41·4	30·22	146	113
D	Cardiff (Heath Filters)	N. J. Peters, Esq., C.E.	5	1 0	132	41·3	31·82	151	123
D	Llanishen Reservoir	N. J. Peters, Esq., C.E.	5	1 0	155	39·4	29·64	150	121
D	Lisvane Reservoir	N. J. Peters, Esq., C.E.	5	1 0	150	37·4	27·30	149	116
D	Rhymney Bridge Reservoir	E. Watkin Edwards, Esq., C.E.	8	0 6	1150	56·8	46·20	161	138
	CARMARTHEN. (Area, 918 sq. mi.)								
	1.—TEIFI. 87 sq. mi.								
	2.—TOWY & C. 715 sq. mi.								
D	Carmarthen (The Friary)	Dr. L. M. Bowen-Jones	5	1 5	62	48·3	36·34	159	122
D	Carmarthen (Model & Prac. Sch.)	C. W. Wilford, Esq.	5	1 5	65	..	42·48	180	129
D	Llandilo (Dynevor Castle)	Lord Dynevor	8	1 4	202	53·2	41·46	186	142
w	Llyn-y-fan Fach (Waen Sychlwch)	Llanelly W.W.	5	1 0	1647	83·2	80·21	..	..
D	Llyn-y-fan Fach (Nant Coch)	Llanelly W.W.	5	1 0	1172	74·5	64·12	151	142
w	Llyn-y-fan Fach (Bua'r Llyn)	Llanelly W.W.	5	1 0	1650	..	78·29	..	..
D	Llyn-y-fan Fach (Troed-y-Foel)	Llanelly W.W.	5	1 0	867	..	51·02	150	133
D	Llanddeusant (Pontcrynfe)	J. Thomas, Esq.	5	1 0	323	55·6	41·91	176	125
D	Abergorlech	S. L. Davies, Esq.	5	1 0	250	..	48·70	160	126
D	Llandovery (Nantyrhogfaen)	D. T. M. Jones, Esq.	5	1 0	249	50·8	39·16	149	125
	3.—LOUGHOR & C. 104 sq. mi.								
D	Llanelly (Old Market Yard)	Borough Surveyor	5	12 0	35	44·6	35·49	156	128
D	Llanelly (Filter Beds)	Borough Surveyor	5	1 0	237	45·1	40·11	166	130
D	Llanelly (Cwmlliedi W.W.) *new g.*	Borough Surveyor	5	1 1	240	..	40·16	162	135
D	Llanelly (Upper Lliedi Res.) *new g.*	Borough Surveyor	5	0 11	290	..	42·17	169	140
w	Llannon Res.	Llanelly W.W.	5	1 0	860	..	44·86	..	..
	4.—TAWE. 7 sq. mi.								
	5. USK. 5 sq. mi.								
	6.—WYE.								
	PEMBROKE. (Area, 617 sq. mi.)								
	1.—TEIFI. 37 sq. mi.								
	2.—NEVERN & C. 91 sq. mi.								
D	Goodwick (Trenewydd)	Mrs. G. M. Johns	5	1 0	350	..	24·61	152	111
	3.—WEST COAST STREAMS. 82 sq. mi.								
	4.—CLEDDAU & C. 407 sq. mi.								
d	Pembroke (Stackpole Court)	Mr. F. G. Garlick	6	1 6	60	39·3	35·76	..	..
D	TENBY (THE PRIORY)	The Town Clerk	8	0 10	64	40·9	34·68	159	121
D	ST. ANN'S HEAD (C. Guard Stn.)	Meteorological Officer	8	1 0	142	35·3	33·84	167	128
D	Pembroke Dock (County School)	J. H. Garnett, Esq.	5	1 0	85	42·7	35·45	158	119
D	Pembroke Dock (Aerodrome)	Meteorological Officer	8	1 0	90	..	36·05	165	131
d	Saundersfoot (Hean Castle)	Lord Merthyr	5	1 0	206	36·3	30·65	..	..
D	Saundersfoot (Stepaside, Merryvale)	J. C. Pickering, Esq.	5	0 10	105	..	35·60	169	135
D	Narberth (Cwmderwen)	Mrs. Allen	5	1 0	300	..	43·02	178	140
	Haverfordwest (Picton Castle)	Sir C. E. G. Philipps, Bt.	5	0 10	138	46·8	39·37	..	..
D	HAVERFORDWEST (Portfield)	The late J. W. Phillips, Esq.	5	1 0	250	44·8	39·67	174	139
D	Haverfordwest (Grammar Sch.)	The late J. W. Phillips, Esq.	5	1 0	95	46·4	38·33	164	128
d	Mynachlogddû (Cl. School)	G. J. Williams, Esq.	5	1 4	630	60·7	54·69	..	..

DIVISION XI—MONMOUTH, WALES, AND THE ISLANDS—(*con.*).

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CARDIGAN. (Area, 688 sq. mi.)		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
1.—DOVEY. 20 sq. mi.								
D Glandyfi (Ynyshir Hall)	W. H. Mappin, Esq.	5	1 2	45	..	31·33	177	130
2.—YSTWYTH & C. 347 sq. mi.								
D Llanafan (Crosswood Park)	The Earl of Lisburne	5	1 0	201	..	30·38	148	122
D Yspytty-ystwyth (Hafod)	T. J. Waddingham, Esq.	5	1 3	580	..	33·81	164	129
D ABERYSTWYTH (Corporation Yard)	The Town Clerk	8	1 0	69	..	27·08	178	131
D Aberystwyth (North Parade)	Dr. A. Thomas	8	2 6	16	..	26·17	178	125
D ABERYSTWYTH (P.B.S.)	Prof. R. G. Stapledon, M.A.	5	1 0	452	..	26·96	183	123
D TALYBONT (LLETTY-EVAN-HEN)†	Prof. R. G. Stapledon, M.A.	5	1 0	900	..	28·73	172	131
3.—TEIFI. 260 sq. mi.								
D Llechryd (Castle Malgwyn)	Mrs. Gower	5	1 0	50	..	31·56	150	127
D Cardigan (Plas Llangoedmore)	D. Berrington Davies, Esq.	5	1 0	120	..	(33·18)	155	132
D Cardigan (County School)	W. R. Jones, Esq., M.A.	5	1 6	72	..	29·72	138	106
D Lampeter (Falcondale)	Mr. A. R. Taylor	5	1 0	498	..	39·72	173	145
4.—TOWY. 46 sq. mi.								
d Abergwesyn (Nantneuadd)	W. Roberts, Esq., for M.O.	5	1 0	1000	..	51·23	..	..
M Tregaron (Maes-y-bettws)	T. Jones, Esq., for M.O.	5	1 0	910	..	(47·40)	..	..
5.—WYE. 15 sq. mi.								
M Birmingham W.W. (Llyn Gynon)	J. W. Wilkinson, Esq., C.E.	5	1 0	1500	..	49·45	..	..
M Birmingham W.W.(Bwlchyrhendre)	J. W. Wilkinson, Esq., C.E.	5	1 0	1585	..	50·75	..	..
M Birmingham W.W. (Claerddu)	J. W. Wilkinson, Esq., C.E.	5	1 0	1470	..	51·15	..	..
M Birmingham W.W. (Gwngu)	J. W. Wilkinson, Esq., C.E.	5	1 0	1490	..	45·30	..	..
d Birmingham W.W. (Abergwngu)	J. W. Wilkinson, Esq., C.E.	5	1 0	1150	..	(47·65)	..	155
M Plynlimon	J. Thomas, Esq., for M.O.	5	1 0	1630	108·0	61·50	..	..
BRECON. (Area, 733 sq. mi.)								
1.—TOWY. 17 sq. mi.								
2.—TAWE. 41 sq. mi.								
D Ystradgynlais (Yniscedwyn Ho.)	G. Coleman, Esq.	5	0 9	232	65·2	46·08	148	127
D Swansea W.W. (Nantyrwydd)	Lt.-Col. F. Hibbert, C.E.	5	0 10	908	90·8	57·63	176	145
3.—NEATH. 48 sq. mi.								
D Ystradfellte Reservoir	The Engineer	5	1 0	1147	85·4	58·23	172	128
4.—TAFF. 48 sq. mi.								
D Aberdare (Nanthir Reservoir)	I. A. Bryant, Esq., C.E.	5	1 0	860	59·6	48·76	178	135
D Taf Fechan (Pontsticill) No. 12	A. C. Quiningborough, Esq.	5	1 0	1031	..	48·34	194	138
M Taf Fechan (Pontsticill West) 14	A. C. Quiningborough, Esq.	5	1 0	1254	..	(44·35)	..	..
D Cardiff W.W. (Llwynon Res.)	N. J. Peters, Esq., C.E.	5	1 0	860	62·7	49·04	180	134
w Cardiff W. W. (Nant Ffynnon)	N. J. Peters, Esq., C.E.	5	1 0	1352	..	54·46	..	..
M Cardiff W.W. (Garn Ddu)	N. J. Peters, Esq., C.E.	5	1 0	1340	..	53·19	..	..
w Cardiff W.W. (Pont-ar-daf)	N. J. Peters, Esq., C.E.	5	1 0	850	67·9	51·16	..	..
D Cardiff W.W. (Garw-nant)	N. J. Peters, Esq., C.E.	5	1 0	1100	..	56·97	185	141
w Cardiff W.W. (Nant-Gwineu)	N. J. Peters, Esq., C.E.	5	1 0	1200	..	(50·89)	..	..
w Cardiff W.W. (Cefn Gougarn)	N. J. Peters, Esq., C.E.	5	1 0	1362	..	56·61	..	..
w Cardiff W.W. (Llysiog)	N. J. Peters, Esq., C.E.	5	1 0	1080	..	51·52	..	..
D Taf Fechan (Pentwyn Res. S.)	A. C. Quiningborough, Esq.	5	1 0	1120	..	53·41	190	140
Taf Fechan (Pentwyn Res. N.)	A. C. Quiningborough, Esq.	5	1 0	1090	..	53·47	..	..
w Cardiff W.W. (Twyn Gareg)	N. J. Peters, Esq., C.E.	5	1 0	1501	..	(62·17)	..	..
M Cardiff W.W. (Blaen Nant Ddu)	N. J. Peters, Esq., C.E.	5	1 0	1550	..	(52·93)	..	..
M Cardiff W.W. (Nant Ddu)	N. J. Peters, Esq., C.E.	5	1 0	1560	..	53·48	..	..
D Cardiff W.W. (CANTREF R.) No. 2	N. J. Peters, Esq., C.E.	5	1 0	1080	69·8	53·91	179	142

† Previously called Elerch (Lletty-evan-hen).

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	BRECON—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
	4.—TAFF—(*con.*).								
D	Cardiff W.W.(Beacons Res.) No. 6	N. J. Peters, Esq., C.E.	5	1 0	1340	79·3	57·91	183	140
W	Cardiff W.W. (Nant Penig) No. 3	N. J. Peters, Esq., C.E.	5	1 0	2000	85·8	66·51	..	..
M	Cardiff W.W. (Blaen Nant Crew)	N. J. Peters, Esq., C.E.	5	1 0	2090	..	54·71	..	..
D	Cardiff W.W. (Storey Arms Field)	N. J. Peters, Esq., C.E.	5	1 0	1430	..	68·01	179	142
W	Cardiff W.W.(Blaen Taf Fawr) *new g*	N.J. Peters, Esq., C.E.	5	1 0	1430	86·8	62·66	..	..
D	Taf Fechan (Neuadd Rs.) No. 1	A. C. Quiningborough, Esq.	5	1 0	1462	*70·3*	69·18	187	143
D	Taf Fechan (Neuadd Rs.) No. 1A	A. C. Quiningborough, Esq.	5	1 0	1423	..	66·04	187	148
D	Taf Fechan (Neuadd Rs.) No. 4	A. C. Quiningborough, Esq.	5	1 0	1487	*82·7*	64·74	187	147
D	Taf Fechan (Neuadd Rs.) No. 11	A. C. Quiningborough, Esq.	5	1 0	1524	68·3	60·72	187	145
D	Taf Fechan (Neuadd Rs.) No. 11A	A. C. Quiningborough, Esq.	5	1 0	1520	..	64·73	187	151
M	Taf Fechan (Neuadd Rs.) No. 2	A. C. Quiningborough, Esq.	5	1 0	1993	*72·7*	57·65	..	..
M	Taf Fechan (Neuadd Rs.) No. 5	A. C. Quiningborough, Esq.	5	1 0	1515	*81·1*	59·75	..	..
M	Taf Fechan (Neuadd Rs.) No. 10	A. C. Quiningborough, Esq.	5	1 0	1700	72·7	57·70	..	..
M	Taf Fechan (Neuadd Rs.) No. 3	A. C. Quiningborough, Esq.	5	1 0	1843	60·6	59·15	..	..
M	Taf Fechan (Neuadd Rs.) No. 7	A. C. Quiningborough, Esq.	5	1 0	2017	*81·1*	71·10	..	..
M	Taf Fechan (Neuadd Rs.) No. 8	A. C. Quiningborough, Esq.	5	1 0	1723	*85·7*	61·20	..	..
M	Taf Fechan (Neuadd Rs.) No. 8A	A. C. Quiningborough, Esq.	5	1 0	1780	..	60·65	..	..
M	Taf Fechan (Neuadd Rs.) No. 6	A. C. Quiningborough, Esq.	5	1 0	2099	*92·4*	69·10	..	..
	5.—RHYMNEY. 2 sq. mi.								
	6.—EBBW. 7 sq. mi.								
D	Ebbw Vale W.W. (Llangynidr) 1	P. I. Davies, Esq., C.E.	5	1 0	1413	58·8	50·19	147	140
D	Ebbw V. W.W.(Llangynidr) W 3	P. I. Davies, Esq., C.E.	5	1 0	1468	..	50·57	147	139
D	Ebbw V. W.W. (Llang'ndr) NW2	P. I. Davies, Esq., C.E.	5	1 0	1471	..	50·17	147	139
D	Ebbw Vale W.W. (Carno, S.)	P. I. Davies, Esq., C.E.	5	1 0	1262	..	49·90	147	141
D	Ebbw Vale W.W. (Carno, E.)	P. I. Davies, Esq., C.E.	5	1 0	1391	..	49·82	147	138
D	Ebbw Vale W.W. (Carno, W.)	P. I. Davies, Esq., C.E.	5	1 0	1412	..	50·85	147	139
D	Ebbw Vale W.W. (Carno, N.)	P. I. Davies, Esq., C.E.	5	1 0	1491	..	49·65	147	138
	7.—USK. 299 sq. mi.								
	Torpantau (Darenfawr)	Newport Corporation	5	1 0	1172	..	57·97	..	..
	Torpantau (Ynysposte)	Newport Corporation	5	1 0	741	..	54·79	..	..
	Torpantau (Blaen-caer-fanell)	Newport Corporation	5	1 0	1584	..	57·40	..	..
D	Talybont (Ffynonwen)	Newport Corporation	5	1 0	610	..	47·67	166	138
	Talybont (Pwll Ifor)	Newport Corporation	5	1 0	1224	..	52·56	..	..
D	Talybont (Aberclydach)	G. Garnons Williams, Esq.	8	0 9	520	..	38·23	147	122
D	Crickhowell (Gwernvale)	E. Pirie Gordon, Esq.	5	1 0	393	*41·5*	33·30	172	125
D	Crickhowell (Glanusk Park)	Lord Glanusk	5	1 0	290	..	35·75	171	135
M	Swansea W.W. (Cray Rs.) No. 2	Lt.-Col. F. Hibbert, C.E.	5	1 0	1019	..	67·30	..	..
D	Swansea W.W.(Cray Rs.) No.1 (+A)	Lt.-Col. F. Hibbert, C.E.	5	1 0	1043	..	54·96	182	136
M	Cray Post Office	J. A. Jones, Esq., for M.O.	5	1 0	930	..	47·25	..	..
D	Talybont (Ashford)	J. Henderson, Esq.	5	1 0	360	..	37·32	158	113
M	Talybont (Cwy Parc)	Rev. D. W. G. Bartlett	5	1 6	480	..	34·73	..	..
D	Llanfrynach (Ty-mawr)	Miss M. D. de Winton	5	1 0	450	..	35·91	171	128
D	Crickhowell (Dan-y-Parc)	R. G. C. C. Sandeman, Esq.	8	1 0	230	..	34·45	155	122
M	Crickhowell (Cwmdu Rectory)	Rev. W. A. Davies	5	1 0	430	..	25·79	..	..
M	Crickhowell (Tal-y-maes)	W. Jones, Esq., for M.O.	5	1 0	1250	..	33·90	..	..
d	Trecastle (Blaenau-hydfer)	Mrs. Morgan, for M.O.	5	1 0	970	..	(56·78)	..	..
D	Brecon (Tairbull School)	I. L. Price, Esq.	5	1 0	660	52·0	42·31	156	130
D	Brecon (Ffrwdgrech)	Capt. J. D. D. Evans	8	1 1	570	..	35·77	143	122
d	Brecon (Mount St. Sch. Gdns.)	The Headmaster	5	0 11	500	..	34·48	..	..
D	Battle (Penoyre)	G. E. Weekes, Esq.	5	1 0	830	..	38·49	182	137
D	Black Mountains (Blaen-y-cwm)	J. F. Jupp, Esq., C.E.	5	1 0	1423	..	43·34	162	144
D	Black M. (Dam Site Grwyne Fawr)	J. F. Jupp, Esq., C.E.	5	1 0	1620	..	45·73	160	145
M	Upper Chapel (Tymawr)	Mrs. Probert	5	1 0	945	46·9	34·10	..	..

DIVISION XI—MONMOUTH, WALES, AND THE ISLANDS—(*con.*).

	STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Rain-gauge: Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
	BRECON—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
	8.—WYE. 271 sq. mi.								
D	Cathedine Rectory	Rev. D. H. Picton, for M.O..	5	1 6	650	..	26·50	148	109
D	Talgarth (Arfryn)	F. Morgan, Esq.	5	1 0	450	*33·2*	29·85	142	116
D	Talgarth (Pontiwal Sanatorium)	Dr. H. E. Watson	5	0 10	500	..	31·17	178	137
D	Glasbury (Gwernyfed Park)	H. H. Miller, Esq.	5	1 0	375	31·5	27·11	141	113
M	Abergwesyn (Trallwn)	J. Felix, Esq., for M.O.	5	1 0	1000	..	53·00	..	..
	Llanafanfawr	W. D. Swan, Esq.	5	1 3	800	..	40·26	..	..
M	Newbridge (Pengraig)	Miss A. Williams, for M.O...	5	1 0	960	56·8	41·10	..	..
D	Newbridge (Llysdinam)	Sir C. Venables Llewelyn, Bt.	5	1 3	646	41·2	32·51	167	132
M	Birmingham W.W. (Cors-yr-hwch)	J. W. Wilkinson, Esq., C.E..	5	1 0	1775	..	(60·08)	..	..
M	Birmingham W.W. (Esgair Ceiliog)	J. W. Wilkinson, Esq., C.E..	5	1 0	1560	..	54·59	..	..
M	Birmingham W.W. (Llyn-Carw)	J. W. Wilkinson, Esq., C.E..	5	1 0	1775	..	56·54	..	..
M	Birmingham W.W. (Nant-y-car)	J. W. Wilkinson, Esq., C.E..	5	1 0	1545	..	(53·67)	..	..
M	Birmingham W.W. (Arban)	J. W. Wilkinson, Esq., C.E..	5	1 0	1500	..	54·20	..	..
M	Birmingham W.W. (Tyn-y-pant)	J. W. Wilkinson, Esq., C.E..	5	1 0	1320	63·2	(44·95)	..	..
M	Birmingham W.W. (Esgair Garthen)	J. W. Wilkinson, Esq., C.E..	5	1 0	1590	..	56·08	..	..
D	Birmingham W.W. (Elan Village)	J. W. Wilkinson, Esq., C.E..	5	1 0	700	..	41·28	174	142
	RADNOR. (Area, 474 sq. mi.)								
	1.—WYE. 424 sq. mi.								
D	Glasbury-on-Wye (Hampton Sc.)	D. W. Lloyd, Esq.	5	1 0	274	33·9	24·29	136	97
D	Llyswen (Llanstephan Ho. Gdns.)	Lady Phillips	5	1 3	440	..	30·21	158	114
d	Builth (Cefndyrys)	Capt. E. A. Thomas.	5	1 10	740	41·5	(33·89)	(154)	(139)
	Builth Rd. (St. John's Vicarage)	Rev. Canon J. L. Bryans...	5	1 0	550	41·9	32·98	156	127
M	New Radnor (Gryliss)	H. Langston, Esq.	5	1 0	1200	..	30·64	..	..
d	New Radnor (Harpton Crt. Gdns.)	The Head Gardener	5	0 9	700	..	27·85	..	..
	New Radnor	John Langston, Esq.	5	1 0	750	44·1	29·81	181	..
D	Llandrindod Wells	Rev. J. L. Herbert.	5	1 0	712	39·3	34·32	171	133
D	Birmingham W.W. (Tyrmynydd)	J. W. Wilkinson, Esq., C.E..	5	1 0	832	62·1	(44·00)	188	142
D	Birmingham W.W. (Nantgwillt)	J. W. Wilkinson, Esq., C.E..	5	1 0	840	63·2	44·59	190	143
M	Birmingham W.W. (Dwfnant)	J. W. Wilkinson, Esq., C.E..	5	1 0	1050	67·8	(45·90)	..	..
M	Birmingham W.W. (Esgair Gader) 2	J. W. Wilkinson, Esq., C.E..	5	1 0	1500	68·9	49·95	..	..
M	Birmingham W.W. (Tynllidiart)	J. W. Wilkinson, Esq., C.E..	5	1 0	1006	..	(46·55)	..	..
d	Birmingham W.W. (Claerwen)	J. W. Wilkinson, Esq., C.E..	5	1 0	1250	65·2	(48·40)	..	148
D	Birmingham W.W. (Tynant)	J. W. Wilkinson, Esq., C.E..	5	1 0	1020	63·6	49·12	193	149
D	Rhayader (Penralley)	E. D. Prothero, (M.O.)	5	1 0	757	50·6	33·09	207	135
	Rhayader (East Street)	R. Ashton, Esq.	5	1 0	700	..	36·23	..	..
M	Birmingham W.W. (Cerigllwydion)	J. W. Wilkinson, Esq., C.E..	5	1 0	1710	74·8	(54·45)	..	..
M	Birmingham W.W. (Pen-y-gareg)	J. W. Wilkinson, Esq., C.E..	5	1 0	1500	55·2	(40·89)	..	..
M	Birmingham W.W. (Pen-y-gareg) 2	J. W. Wilkinson, Esq., C.E..	5	1 0	1540	43·9	(41·63)	..	..
M	Birmingham W.W. (Bryn Hir)	J. W. Wilkinson, Esq., C.E..	5	1 0	1470	..	(53·90)	..	..
M	Birmingham W.W. (Abercaethon)	J. W. Wilkinson, Esq., C.E..	5	1 0	1240	..	(49·35)	..	..
M	Birmingham W.W. (Calettwr)	J. W. Wilkinson, Esq., C.E..	5	1 0	1490	71·1	(57·40)	..	..
M	Birmingham W.W. (Figin) No. 2.	J. W. Wilkinson, Esq., C.E..	5	1 0	1700	83·3	58·35	..	..
M	Birmingham W.W. (Aberhenllan)	J. W. Wilkinson, Esq., C.E..	5	1 0	1070	58·8	(47·15)	..	..
M	Llanbister (Llananno)	Mrs. A. Jones, for M.O.	5	1 0	900	45·1	32·75	..	..
	2.—SEVERN—Right Bank Tributaries. 50 sq. mi.								
	MONTGOMERY. (Area, 797 sq. mi.)								
	1.—DOVEY. 120 sq. mi.								
D	Machynlleth (Plas Llwyn Gwern)	The Hon. R. E. B. Beaumont	5	0 9	150	..	54·79	163	142
	Cemmaes (Glyn Orig)	F. C. Best, Esq.	5	1 0	125	..	38·08	..	..
	2.—YSTWYTH. 7 sq. mi.								
	3.—WYE. 37 sq. mi.								
	4.—SEVERN—Right Bank Tributaries. 154 sq. mi.								
D	Llanidloes (Llidiartywaen Sch.)	G. E. Edwards, Esq.	5	1 3	1150	..	30·10	189	131
d	Llandinam (Broneirion)	D. Humphreys, Esq.	5	1 3	450	..	25·33	..	123
d	Newtown (Penarth Weir)	Canal Engr., L M & S Rly...	8	1 0	321	35·0	27·39	(186)	(131)
D	Montgomery (Oakfield)	Dr. R. E. Game Phillips....	5	1 0	450	..	24·89	176	128

DIVISION XI—MONMOUTH, WALES, AND THE ISLANDS—(*con.*).

STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Rain-gauge: Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
MONTGOMERY—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
5. SEVERN—Left Bank Tributaries. 479 sq. mi.								
D Berriew (Brithdir Hall)	Mrs. F. E. Marston	5	1 0	350	30·7	21·10	197	114
D Berriew (Glyncogen)	H. H. Haines, Esq.	5	1 0	415	..	23·79	161	124
D Welshpool (County School)	The Headmaster	5	1 0	254	30·1	21·57	162	119
D Welshpool (Fron Llwyd)	Col. G. B. D. Harrison	5	1 3	500	33·7	24·56	169	127
D Llanfyllin (Llwyn)	Major W. M. Dugdale	5	0 10	450	..	24·83	164	121
d Llandysilio Rectory	Rev. H. G. Dickinson	5	1 6	250	..	16·21	..	..
D Lake Vyrnwy	J. E. Bradley, Esq.	5	0 7	770	54·0	40·81	157	147
Lake Vyrnwy (Bryn Gwyn)	Col. J. R. Davidson, C.E.	8	1 0	1311	..	39·59	..	..
D Lake Vyrnwy (Bank Cynon Isaf))	Col. J. R. Davidson, C.E.	8	1 0	750	55·3	36·08	166	129
Lake Vyrnwy (Ty Uchaf)	Col. J. R. Davidson, C.E.	8	1 0	860	..	37·59	..	..
Lake Vyrnwy (Heol-y-ffridd) 1	Col. J. R. Davidson, C.E.	8	1 0	913	..	46·83	..	..
Lake Vyrnwy (Heol-y-ffridd) 2	Col. J. R. Davidson, C.E.	8	1 0	830	..	43·12	..	..
Lake Vyrnwy (Tyn-y-ffridd)	Col. J. R. Davidson, C.E.	8	1 0	1010	..	47·37	..	..
Lake Vyrnwy (Lluestwen)	Col. J. R. Davidson, C.E.	8	1 0	1667	..	48·19	..	..
Lake Vyrnwy (Llwynrhiw)	Col. J. R. Davidson, C.E.	8	1 0	1428	..	50·59	..	..
Lake Vyrnwy (Craig-y-Gribin)	Col. J. R. Davidson, C.E.	8	1 0	1422	..	49·80	..	..
Lake Vyrnwy (Carreg Goch)	Col. J. R. Davidson, C.E.	8	1 0	1750	..	45·93	..	..
Lake Vyrnwy (Fawnog)	Col. J. R. Davidson, C.E.	8	1 0	1315	55·7	38·84	..	
FLINT. (Area, 256 sq. mi.)								
1.—DEE. 198 sq. mi.								
d Hanmer (Gredington)	Lady Kenyon	5	1 0	300	30·4	18·60	..	108
D Overton (Fairleigh)	Dr. B. J. E. Wright	5	1 0	220	26·8	19·02	168	108
w Buckley (Hawarden W.W.)	W. Simmons, Esq.	5	1 0	540	28·7	22·03	..	..
D Hawarden (County School)	C. F. Williams, Esq.	5	0 9	257	27·2	18·76	125	100
D Mold (Alun County School)	The Headmaster	5	1 0	365	..	21·21	149	116
D Mold (Mount Pleasant)	R. F. Baker, Esq., C.E.	5	1 0	503	..	23·11	173	117
D Cilcain (No. 2 Reservoir) *old g.*	W. Simmons, Esq.	5	1 0	785	..	26·07	175	128
w Cilcain (No. 4 Reservoir) *new g.*	W. Simmons, Esq.	5	1 0	900	..	25·86	..	..
D Northop (Soughton Hall)	Sir John Bankes	5	1 0	418	32·1	23·71	149	125
D Cilcain (Cilcen Hall)	W. B. Yates, Esq., C.B.E.	5	1 0	650	29·7	21·80	155	113
D Connah's Quay (Mold Road)	R. F. Baker, Esq., C.E.	5	1 0	43	..	18·54	156	106
D Connah's Quay (Pengwladys)	R. F. Baker, Esq., C.E.	5	1 0	231	..	19·25	159	107
D Hawarden Bridge	Messrs. J. Summers & Sons.	8	1 3	17	24·3	18·24	139	97
D Sealand (Aerodrome) (+A)	Meteorological Officer	8	1 0	16	26·0	17·02	149	102
2.—CLWYD. 51 sq. mi.								
D Bodfari (Nantlys)	D. F. Pennant, Esq., D.L.	5	1 5	178	27·4	20·53	138	109
D St. Asaph (St. Beuno's Coll.)	The Procurator	5	1 0	479	..	22·28	192	119
Dyserth Castle	J. B. Price, Esq.	5	1 0	350	..	17·43	..	..
D Rhyl (Sewage Works)	Medical Officer of Health	8	1 0	31	25·8	18·10	147	102
D Prestatyn (St. Chads)	D N. Payne, Esq.	8	1 6	60	..	20·42	158	106
D Prestatyn	Clerk to the U.D.C.	5	1 0	18	..	17·58	138	105
3.—SEVERN—Left Bank Tributaries. 7 sq. mi.								
DENBIGH. (Area, 668 sq. mi.)								
1.—DEE. 278 sq. mi.								
Glynceiriog (Plas Nantyr)	C. B. C. Storey, Esq.	6	1 0	1450	..	31·10	..	..
D Chirk Castle Gardens	Lord Howard de Walden	5	1 0	630	..	21·79	134	111
D Llangollen (Vivod)	Capt. W. Best	5	2 6	640	..	24·56	149	119
D Ruabon (Trevor Hall)	E. Lloyd Edwards, Esq.	5	1 0	500	30·9	23·82	138	120
d Wrexham W. W. (Ty Mawr Res.)	J. A. Davies, Esq.	5	0 9	805	*39·1*	24·96	(173)	(133)
D Wrexham W.W.(Pack Saddle Res.)	J. A. Davies, Esq.	5	0 9	376	32·0	21·86	167	118
d Wrexham W.W. (Cae Llwyd Res.)	J. A. Davies, Esq.	8	0 9	918	*41·1*	24·26	(172)	(132)
d Wrexham W.W. (Cae Llwyd Res.)	J. A. Davies, Esq.	5	0 9	918	*40·5*	24·96	(173)	(137)

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	STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
	DENBIGH—(*con.*)		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
	1.—DEE—(*con.*).								
D	Wrexham (Beechley Road)	O. L. Jones, Esq.	2	1 0	278	..	21·19	141	116
	Wrexham (Madeira Hill)	O. L. Jones, Esq.	5	1 0	281	..	21·87	..	..
D	Llanfihangel-glyn-myfyr	R. F. Baker, Esq., C.E.	5	1 0	898	..	29·51	157	132
D	R. Alwen (Alwen Filter House)	R. F. Baker, Esq., C.E.	5	1 0	1100	..	34·10	186	153
D	R. Alwen (Alwen Dam)	R. F. Baker, Esq., C.E.	5	1 0	1189	..	36·18	190	156
D	R. Alwen (Hafod-llan-isaf) No. 2	R. F. Baker, Esq., C.E.	5	1 0	1172	39·2	28·08	187	155
D	R. Alwen (Hafod-llan-isaf) No. 3	R. F. Baker, Esq., C.E.	5	1 0	1169	36·8	30·62	189	156
W	Pentre Voelas (Nant Heilyn)	R. F. Baker, Esq., C.E.	5	1 0	1225	..	35·56	..	..
D	R. Brenig (Hafod-yr-Onen)	R. F. Baker, Esq., C.E.	5	1 0	1175	..	29·57	180	148
M	Nantglyn (Pant-y-maen)	R. F. Baker, Esq., C.E.	8	1 0	1320	..	37·51	..	..
M	Llyn Bran	R. F. Baker, Esq., C.E.	8	1 0	1428	..	38·30	..	..
	Llanferres (Glanrafon)	Miss A. Simpson	5	1 4	625	..	24·91	..	..
	2.—CLWYD & C. 267 sq. mi.								
	Derwen (Ty Cerrig)	Edgar Billson, Esq.	5	1 0	1030	..	27·57	..	..
d	Pentre Celyn (Council School)	The Headmaster	5	1 3	400	30·1	22·81	..	..
D	Clawdd-newydd No. 2	R. F. Baker, Esq., C.E.	5	1 0	983	..	25·63	139	116
W	Ruthin (Corwen Road)	R. F. Baker, Esq., C.E.	5	1 0	234	..	24·29	..	..
D	Ruthin (Bwlch Tunnel)	R. F. Baker, Esq., C.E.	5	1 0	908	..	24·31	176	138
	Llyn Aled (Aled Isaf Res)	O. P. Cronshaw, Esq.	5	1 0	1170	..	34·77	..	..
D	Llangynhafal (Plâs Drâw)	Major R. Bromhead	5	1 0	419	31·1	23·84	179	129
d	Gwytherin Council School	C. E. Jones, Esq.	5	1 1	730	50·1	34·11	..	..
D	Denbigh (Mental Hospital)	W. Barker, Esq.	4	1 0	316	..	22·51	175	120
d	Llangwyfan (N. Wales San.) farm†	Medical Superintendent	5	1 6	460	..	(22·62)	(159)	(124)
D	Denbigh (Garn)	J. D. W. Griffith, Esq.	5	1 0	447	32·7	22·68	159	125
d	Trefnant School	The Head Teacher	5	1 0	300	..	19·34	..	..
M	Llanefydd (Dolwen Res., S.)	O. P. Cronshaw, Esq.	5	1 0	600	..	24·16	..	..
M	Llanefydd (East)	O. P. Cronshaw, Esq.	5	1 0	570	..	23·96	..	..
D	Llanefydd (Plas Uchaf Res.)	O. P. Cronshaw, Esq.	5	1 0	485	..	25·13	180	134
D	Llanefydd (Glascoed Res.)	O. P. Cronshaw, Esq.	5	1 0	360	..	20·48	165	110
D	Abergele (Sea Road)	Sydney Wilson, Esq.	5	1 0	25	28·4	20·65	151	111
D	Colwyn Bay (Eirias Park)	Borough Surveyor	5	1 0	118	31·1	21·91	159	105
	3.—CONWAY—4 sq. mi.								
d	Pentre Voelas (Voelas Hall)	Mr. T. N. Dickie	5	1 0	640	..	35·80	(169)	(138)
D	Bettws-y-Coed (Rhydycrena)	Mrs. G. Bovill	5	1 0	50	..	35·11	186	150
	4.—SEVERN—Left Bank Tributaries. 47 sq. mi.								
D	Llansilin (Penygwely Res.)	G. W. Lacey, Esq., C.E.	5	1 0	1095	..	22·60	154	116
	MERIONETH. (Area, 661 sq. mi.)								
	1.—DEE. 218 sq. mi.								
D	Bala (Eryl Aran)	Mrs. Burton	8	1 0	600	54·6	42·12	162	149
D	Llandderfel (Pale Gardens)	Sir H. B. Robertson	8	1 0	606	48·2	30·65 ?	144	124
	Trawsfynydd (Cwm Prysor)	N. Wales Power Co., Ltd.	5	1 9	1300	..	58·34	..	..
d	Corwen (Rûg Gardens)	Col. R. Vaughan Wynn	8	1 2	600	36·2	(28·52)	..	..
W	Derwen (Minffordd)	R. F. Baker, Esq., C.E.	5	1 0	971	..	25·54	..	..
	2.—CLWYD. 7 sq. mi.								
	3.—GLASLYN. 92 sq. mi.								
	Trawsfynydd (Tyn Twll)	N. Wales Power Co., Ltd.	5	2 0	750	..	67·60	..	..
	Trawsfynydd (Darn Gae)	N. Wales Power Co., Ltd.	5	2 0	950	..	50·80	..	..
D	Minffordd (Plas Penrhyn)	Mrs. H. Kitching	5	0 9	220	..	41·46	188	149
D	Minffordd (Hafod-Cae-Maen)	G. H. C. Haigh, Esq.	5	1 0	100	50·5	41·84	209	152
D	Tan-y-bwlch (Plas Gardens)	Mr. F. W. Dawe	5	1 0	55	..	47·49	185	148
D	Tan-y-bwlch (Dol-y-Moch)	Mrs. Howland Jackson	5	1 0	55	..	47·08	156	142
D	Festiniog (Hafod Fawr)	Forestry Commission	8	1 4	1000	74·6	48·24	167	144
D	Blaenau Festiniog (Oakeley Q.)	J. Lloyd Humphreys, Esq.	5	1 0	1100	97·1	66·94	167	150
D	Blaenau Festiniog (Llechwedd Q.)	Messrs. J. W. Greaves & Sons	5	1 0	700	..	71·82	216	178

† Previously called N. Wales Sanatorium.

DIVISION XI—MONMOUTH, WALES, AND THE ISLANDS—(*con.*).

	STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
	MERIONETH—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
	4.—MAWDDACH & C. 262 sq. mi.								
D	Towyn (Ynys-y-Maengwyn)	R. Corbett, Esq.	5	1 0	14	..	30·08	164	128
D	Towyn (Bronffynnon) *new g.*	Dr. T. Henry Jones	5	1 0	180	..	31·08	164	130
D	Towyn (Peniarth)	Mrs. Wynne	8	1 0	25	..	39·38	176	149
d	Tal-y-llyn Rectory	Rev. J. Pryce Jones	5	1 0	280	..	48·81	..	..
	Dolgelley (Bronygader)	Lt.-Col. A. E. Jelf-Reveley	5	1 0	200	..	52·50	..	..
D	Dolgelley (Dol'rhyd)	Col. P. H. Enthoven, D.L.	5	1 0	150	..	44·45	146	130
D	Dolgelley (Borthwnog)	Col. C. W. H. Crichton	5	2 3	5	..	41·00	173	136
D	Dolgelley (Bontddu)	E. P. Beale, Esq.	5	0 10	50	58·8	45·88	184	148
D	Trawsfynydd Camp	E. Jones, Esq.	5	1 0	800	67·0	51·15	154	140
	5.—DOVEY. 82 sq. mi.								
D	Aberdovey (Plas Penhelig)	J. M. Howell, Esq., D.L.	5	1 0	120	..	32·30	161	126
D	Pennal (Llwyn-Celyn) *new g.*	Lt.-Col. M. V. le P. Trench	5	1 0	30	..	41·24	173	135
D	Pennal (Talgarth Hall)	Owen D. Jones, Esq.	5	0 9	125	..	42·59	181	134
	6.—SEVERN—Left Bank Tributaries.								
	CARNARVON. (Area, 572 sq. mi.)								
	1.—BARDSEY ISLAND.								
	2.—CONWAY & C. 146 sq. mi.								
	Lake Cowlyd (Capel Curig)	N. Wales Power Co. Ltd.	5	1 0	1400	..	58·58	..	..
	Lake Cowlyd (Llethyr Gwyn) c	C. F. Farrington, Esq., C.E.	5	1 0	1700	..	66·14	162	..
	L. Cowlyd (Ffrith Carreg Wen) A	C. F. Farrington, Esq., C.E.	5	1 0	1168	..	59·75	162	..
d	Trefriw Wells	C. P. Adamson, Esq.	5	1 0	25	..	35·74	(161)	(132)
D	Lake Eigiau (Dam Site) (+A)	N. Wales Power Co., Ltd.	5	1 5	1244	*83·9*	55·93	188	154
d	Llanbedr-y-Cennin (Melynllyn)	W. T. Ward, Esq., C.E.	5	1 0	2065	..	82·30	..	..
d	Llanbedr-y-Cennin (Llyndulyn) *old g*	W. T. Ward, Esq., C.E.	8	1 6	1632	93·6	68·04	..	..
d	Llanbedr-y-Cennin (Llyndulyn) *new g*	W. T. Ward, Esq., C.E.	8	1 6	1632	..	78·44	..	..
d	Llanbedr-y-Cennin (Plasdulyn)	W. T. Ward, Esq., C.E.	8	1 0	509	..	37·29	..	..
D	Tyn-y-Groes (Dolcrwm)	R. S. Fisher, Esq.	5	1 0	100	..	33·36	167	137
D	Tyn-y-Groes (Roe Wen)	Albert Wilson, Esq.	5	1 0	140	..	33·63	182	137
D	Conway (Mussel Tks.)	Ministry of Agric. & Fisheries	5	1 0	50	..	22·86	153	112
	Deganwy (Y Berlfa)	Dr. Willoughby Gardner	5	1 0	35	31·2	24·92	..	..
d	Llandudno (Glanwydden School)	Thomas Roberts, Esq.	5	2 0	28	28·7	22·73	..	..
D	Llandudno (Cricket Ground)	Clerk to the U.D.C.	5	1 0	13	28·1	21·10	165	116
	3.—MENAI STRAITS. 221 sq. mi.								
D	Edeyrn Tydweiliog (Cefnamlwch)	The Head Gardener	5	1 0	300	..	37·45	158	142
D	Madryn Castle (Farm School)	The Principal	5	1 0	278	39·0	(33·41)	172	128
d	Llanaelhaiarn (Cl. School)	J. Hughes, Esq.	5	1 0	500	51·6	39·91	..	..
	Nantlle (Dorothea Quarries)	W. J. Griffith, Esq.	8	60 0	350	..	(44·87)	..	..
	Llandwrog (Glynllivon Park)	Rt. Hon. Lord Newborough	5	1 0	100	44·7	35·48	..	..
D	Llandwrog (Glynllivon Nursery)	Rt. Hon. Lord Newborough	5	1 0	180	..	36·61	160	134
	Llandwrog (Glynllivon Garden)	Rt. Hon. Lord Newborough	5	1 0	100	..	37·58	188	145
	Llandwrog (Glynllivon Fort)	Rt. Hon. Lord Newborough	5	1 0	180	..	38·37	172	138
D	Waenfawr Council School	D. R. Jones, Esq.	5	1 0	520	..	41·42	178	145
	Carnarvon (Belan Fort)	Col. R. Vaughan Wynn	5	1 0	10	33·9	30·31	..	..
D	Llanbeblig (Cefn Rhos)	Miss A. Preece	8	1 0	..	..	33·97	173	137
D	Bethesda (St. Ann's Vicarage)	Rev. Canon W. Morgan	5	1 6	500	*59·8*	42·27	183	149
D	Bethesda (Penrhyn Quarries)	A. H. Richards, Esq.	8	1 0	527	*65·8*	45·68	160	144
D	Bangor (Town Hall)	Water Engineer & Surveyor.	8	1 6	50	..	30·03	153	132
D	Bangor (Penrhyn Castle Gdns.)	Mr. J. Kneller	5	1 0	150	..	29·83	165	141
D	Bangor (The Cottage)	J. H. Hamilton-Lee, Esq.	5	1 0	210	..	30·34	174	127
D	Aber (University Coll. Farm)	Prof. R. G. White	5	1 0	60	..	27·64	170	124
D	Llanfairfechan (Cae Cawr)	W. Timmins, Esq.	5	1 0	400	..	27·21	154	127
D	Llanfairfechan	The Surveyor, U.D.C.	5	1 0	120	37·9	28·24	161	127
d	Penmaenmawr (Plas Uchaf)	R. W. Barnes, Esq.	5	2 6	470	..	31·16	..	..

DIVISION XI—MONMOUTH, WALES, AND THE ISLANDS—(*con.*).

	STATIONS.	AUTHORITIES.	Diam.	Rain-gauge Height of Rim above Ground.	Height of Ground above Sea Level.	Average Rainfall.	1933. Rainfall.	Days with ·01 in. or more.	Days with ·04 in. or more.
	CARNARVON—(*con*).		*ins.*	*ft. ins.*	*ft.*	*ins.*	*in.*		
	4.—ERCH & C. 155 sq. mi.								
D	Abersoch (Craig-y-Mor)††	Lady Winterbotham	8	1 0	50	..	31·97	184	135
D	Pwllheli (West End)†	B. V. Howell, Esq.	8	1 0	9	..	33·42	175	132
w	Pwllheli (Bodfean Hall)	Rt. Hon. Lord Newborough	5	1 0	155	43·7	37·57	..	..
D	Pwllheli (Bodfean Hall Gdns.)	Rt. Hon. Lord Newborough	5	3 9	155	43·2	38·48	153	139
D	Criccieth (Bron Eifion)	J. E. Creaves, Esq.	5	1 0	100	..	33·45	159	142
	5.—GLASLYN 50 sq. mi.								
D	Portmadoc (Wern)	R. M. Greaves, Esq.	5	1 0	90	..	39·31	176	139
d	Beddgelert (Co. School)	The Headmaster	5	1 2	133	..	64·16	..	..
w	Hafodtanygraig	Arnold White, Esq.	5	1 6	280	..	73·26	..	..
	Snowdon (Wenallt) No. 6	N. Wales Power Co., Ltd.	5	1 2	1050	..	(94·20)	..	..
D	Snowdon (Cwm Dyli) (+A) No. 11	N. Wales Power Co., Ltd.	5	1 0	310	*117·9*	83·38	203	174
	Snowdon (Cwm Dyli, Old Rd.) 14	N. Wales Power Co., Ltd.	5	0 10	325	..	82·20	..	..
	Snowdon (Llewedd) No. 2	N. Wales Power Co., Ltd.	5	1 3	1485	..	86·85	..	..
M	Snowdon (Delta) No. 7	N. Wales Power Co., Ltd.	5	1 0	1435	..	122·15	..	..
M	Snowdon (Glaslyn) No. 3	N. Wales Power Co., Ltd.	5	0 8	2050	..	97·55	..	..
M	Snowdon (Teryn) No. 1	N. Wales Power Co., Ltd.	5	1 0	1080	..	105·80	..	..
d	Snowdon (Llydaw Intake) No. 10	N. Wales Power Co., Ltd.	5	1 0	1480	..	106·64	..	154
w	Snowdon (L. Llydaw Copper M.) 9	N. Wales Power Co., Ltd.	5	1 5	1480	..	111·38	..	..
M	Snowdon (Llyn Llydaw) No. 5	N. Wales Power Co., Ltd.	5	1 0	1470	..	84·75	..	..
M	Snowdon (Grib Goch) No. 8	N. Wales Power Co., Ltd.	5	1 3	2340	..	121·55	..	..
	ANGLESEY. (Area, 275 sq. mi.)								
D	Bryn-siencyn (Trefarthen)	Miss E. Meyrick	5	1 0	30	..	32·11	165	137
D	Llangadwaladr (Bodorgan)	Mr. W. Pilgrim	5	1 0	100	37·5	32·14	169	130
§	Llanfaelog	H. S. Lowe, Esq., J.P.	5	0 8	50	32·0	24·79	..	..
	Llanfaelog, No. 2	H. S. Lowe, Esq., J.P.	..	0 7	50	..	27·17	..	..
D	Plas Cadnant	Major T. Fanning Evans	5	1 0	156	..	32·83	167	136
d	Llangefni (Fronheulog)	A. H. Withinshaw, Esq.	5	1 0	125	..	29·67	..	..
d	Llansadwrn (Treffos)	C. Panton Vivian, Esq	..	..	318	..	32·70	..	125
	Beaumaris (Fryars) (R)	Mrs. Burton	10	2 0	20	37·4	26·80	..	..
D	Llangwllog (Trescawen)	Mrs. Pritchard-Rayner	5	1 0	239	42·2	30·98	179	142
D	Penmon (Tros-yr-afon)	Major H. W. Jones	8	2 0	60	..	26·89	171	127
D	Bodedern (Presaddfed)	Lt.-Col. W. A. Fox-Pitt	5	1 0	150	38·9	28·47	161	139
D	HOLYHEAD (Salt Island) (+A)	Assistant-in-Charge (M.O.)	8	1 0	26	34·8	23·36	170	119
D	Llanerchymedd (Llwydiarth Esgb)	E. Thomas, Esq.	5	1 0	175	38·1	29·12	180	149
d	Lligwy *new g*	Lord Boston	5	1 0	170	..	28·61	..	..
D	Amlwch (Dyffryn Adda)	Major T. Fanning Evans	5	1 3	178	36·3	26·59	161	129
	ISLE OF MAN. (Area, 227 sq. mi.)								
	St. Marks (Ballahowin)	Rev. R. Jones	5	1 0	374	..	34·54	162	135
D	DOUGLAS (Borough Cemetery)	The Borough Surveyor	8	1 0	284	41·2	32·76	181	132
D	Douglas (Clypse Res., Onchan)	T. C. Greenfield, Esq, C.E.	8	1 0	440	43·9	33·54	192	134
D	West Baldwin Reservoir *new g*	T. C. Greenfield, Esq., C.E.	5	1 0	470	..	43·16	184	143
	Maughold Head	Com'rs. of N. Lighth's	5	0 6	230	..	23·63	..	..
d	Ramsey (Town Hall)	The Town Surveyor	8	21 0	18	..	30·12	..	..
d	Ramsey (North Promenade)	The Town Surveyor	5	1 0	15	..	29·99	162	105
	CHANNEL ISLANDS. (Area, 76 sq. mi.)								
	JERSEY. 45 sq. mi.								
D	Pontac	Mrs. E. G. Barnes*	5	1 6	30	..	30·04	169	129
D	St. Saviours (Petit Menage)	G. T. Robin, Esq.	5	0 10	30	..	30·80	167	132
D	Grouville	L. de Carteret Malet, Esq.*	5	1 6	70	..	33·07	157	126
D	ST. HELIERS (Harbour Office)	The Greffier	8	1 0	28	..	29·66	155	121
D	St. Heliers (St. Louis O.) *new*	Rev. C. Burdo, S.J.	8	1 5	180	31·9	30·42	171	124
D	St. Brelade (La Sergenté)	W. Benest, Esq	5	1 4	194	..	26·46	160	118
D	St. Aubins (Belle Vue)	C. J. Sumner, Esq.	5	1 2	220	..	29·11	164	123
D	St. Lawrence (Beaumont Marsh)‡	F. A. Laxen, Esq.	5	1 0	60	..	30·20	152	126
D	Millbrook (St. Helier W.W.)	A. J. Jenkins, Esq., C. E.	5	0 11	53	..	30·33	149	118
D	St. Ouen's Manor	R. Malet de Carteret, Esq.	5	2 0	270	..	27·99	155	125
D	Handois Reservoir	A. J. Jenkins, Esq.	5	1 0	272	..	31·04	162	118
D	Trinity Rectory	Rev. S. J. Gruchy	5	1 0	375	..	31·11	167	134

§ Gauge over exposed. * *Per* A. J. Jenkins, Esq. † Previously called Talcymerau Bach.
‡ Previously at Little Grove. †† Gauge moved 40 yards south, September 15, 1933.

DIVISION XI—MONMOUTH, WALES, AND THE ISLANDS—(*con.*).

STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
CHANNEL ISLANDS—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
GUERNSEY. 25 sq. mi..								
D St. Martin's (Les Blanches)	B. T. Rowswell, Esq.	5	1 0	309	..	28·32	159	121
D St. Martin's (Hatnez)	A. A. Allain, Esq., C.E.	5	0 8	336	..	26·26	156	117
D Villiaze	A. A. Allain, Esq., C.E.	5	0 6	302	..	26·50	151	117
D St. Peter-in-the-Wood (Les Prês)	Miss M. A. Brock	5	1 0	250	..	25·93	146	117
D St. Peter Port (Grange Road)	States Met. Comm.	5	1 0	175	33·2	29·21	157	123
D St. Peter Port (Market Street)	B. T. Rowswell, Esq.	5	52 8	99	..	28·06	159	126
D Castel (King's Mills)	A. A. Allain, Esq., C.E.	5	2 0	47	..	26·26..	147	109
D Rohais (Colborne Villa)	T. J. Guilbert, Esq., C.E.	5	1 0	116	..	27·92	154	119
D Menheniot Vineries	Major H. Roper	5	1 1	97	..	28·61	146	123
SARK. 2 sq. mi.								
D Pointe Robert	B. T. Rowswell, Esq.	5	1 0	214	..	22·95	158	103
HERM. 1 sq. mi.								
D Herm	Sir Percival Perry	5	1 3	8	..	22·38	185	108
ALDERNEY, 3 sq. mi.								
D St. Anne's	B. T. Rowswell, Esq.	5	1 0	235	..	25·04	147	109

SCOTLAND.

DIVISION XII—SOUTHERN COUNTIES.

STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Rain-gauge: Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
WIGTOWN. (Area, 488 sq. mi.)		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
1.—LOCH RYAN. 46 sq. mi.								
D Castle Kennedy (Lochinch)	Earl of Stair	8	1 0	85	..	36·27	174	146
2.—WESTERN GALLOWAY, 44 sq. mi.								
d Logan House	K. McDouall, Esq.	8	1 0	80	37·3	29·62	..	..
Corsewall	Com'rs. of N. Lighthouses	8	4 1	48	..	26·40	..	..
3.—LUCE BAY. 186 sq. mi.								
D Whithorn (Physgill)	F. B. Hopkins, Esq.	5	1 0	170	36·4	27·24	172	119
D Whithorn (Glasserton)	Adm. Johnston Stewart, C.B.	5	1 0	225	39·5	29·60	167	124
D Port William (Monreith)	L. R. Younger, Esq.	5	1 0	145	38·5	28·00	151	114
Stoneykirk (Ardwell House)	Sir E. MacTaggart Stewart, Bt.	8	1 7	65	36·3	30·77	..	..
D New Luce (Public School)	J. Mackay, Esq.	5	1 0	200	46·6	35·28	182	144
4.—CREE & WIGTOWN BAY. 212 sq. mi.								
D Garlieston (Galloway Ho.)	P. H. Fletcher, Esq.	5	0 11	40	..	30·08	166	130
D Garlieston (Culderry)	Capt. A. Walmsley	5	1 0	25	..	32·18	170	134
D Kirkcowan (Craighlaw)	Major W.M. F. Hamilton	5	1 0	300	48·3	36·29	188	147
D Newton Stewart (Little Barraer)	Brig.-Gen. G. M. P. Hawthorn, C.B.E., D.S.O.	5	1 0	180	..	34·76	178	132
D Newton Stewart (Duncree)	Maj.-Gen. Sir Keith Stewart K.C.B.	8	5 5	125	..	34·67	191	132
KIRKCUDBRIGHT. (Area, 902 sq. mi.)								
1.—DOON. 16 sq. mi.								
2.—CREE & WIGTOWN BAY. 222 sq. mi.								
d Borgue (Corseyard)	J. Douglas Brown, Esq.	5	1 0	50	39·8	30·84	..	126
w Kirroughtree Forest	J. McK. Graham, Esq.	5	1 3	350	..	(34·78)	..	..
3.—DEE. 377 sq. mi.								
D Threave	Major C. L. Gordon	5	1 0	275	..	38·72	164	134
D Mossdale (Hensol)	Mrs. Cuninghame	8	1 0	200	51·7	41·38	194	131
D Mossdale (Barney Water)	Galloway Water Power Co.	5	1 0	240	..	42·88	158	135
D Orchars	Galloway Water Power Co.	5	1 0	450	..	52·29	167	146
D Clatteringshaws (Sch. Ho.)	Galloway Water Power Co.	5	1 0	600	..	(60·24)	192	143
D Craigencallie	Galloway Water Power Co.,	5	1 0	740	..	64·84	189	157
Loch Dee	Galloway Water Power Co.	5	1 0	800	..	59·71	..	..
D Dalry (Glendarroch)	Miss M. Barbour	5	2 0	190	54·5	41·19	174	135
D Dalry (Garroch)	Arthur Young, Esq.	8	1 0	250	59·7	47·36	165	136
d Backhill of the Bush	Galloway Water Power Co.	5	1 0	890	..	59·57	..	135
D Dalry (Forrest Lodge)	Sir John Wood, Bart.	5	1 0	500	63·2	50·50	152	130
d Carsphairn (Carlins Cairn)	Galloway Water Power Co.	5	1 0	1250	..	74·25	..	..
D Carsphairn (Shiel)	S. Wilson, Esq.	5	1 0	825	73·9	59·12	186	156
D Knowehead (Castle Douglas)	Galloway Water Power Co.	5	1 0	940	..	(41·37)	164	132
D Carsphairn (Knockgray)	Miss Clark Kennedy	8	1 0	641	56·0	44·75	196	138
d Knowehead (Cornharrow)	Galloway Water Power Co.	5	1 0	810	..	43·96	..	..
d Carsphairn (Knockingarroch)	Galloway Water Power Co.	5	1 0	740	..	43·85	..	..
D Carsphairn (Glennoch)	Galloway Water Power Co.	5	1 0	1330	..	48·43	190	147
D Knowehead (Lorg)	Galloway Water Power Co.	5	1 0	960	..	49·88	169	154
D Carsphairn Moor	Galloway Water Power Co.	5	1 0	790	..	48·78	206?	144?
4.—URR & C. 196 sq. mi.								
Auchencairn (Torr House)	Thomas Ovens, Esq.	5	1 0	50	47·1	34·89	..	..
d Dalbeattie (Kirkennan)	Major Aymer Maxwell	5	0 9	30	46·2	(39·79)	(150)	(135)
D Dalbeattie (Drumstinchall)	Mrs. Hanbury	8	0 9	400	46·1	36·29	153	129
d Chipperkyle	Lt.-Col. J. A. Pollok Morris.	5	1 6	310	..	32·42	..	119
5.—NITH & C. 91 sq. mi.								
D Lochrutton (Dumfries W.W.)	J. Smellie, Esq.	5	1 0	273	44·0	36·09	190	131
D Carrachan	J. Hitchen, Esq.	5	1 0	73	..	33·57	167	126
DUMFRIES. (Area, 1,074 sq. mi.)								
1.—CLYDE—Right Bank Tributaries. 5 sq. mi.								
2.—URR. 6 sq. mi.								
3.—NITH & C. 421 sq. mi.								
D Ruthwell (Comlongon Cas.)	W. Brown for the Earl of Mansfield	5	1 0	67	..	25·71	153	111
D Ruthwell (Hetland)	Miss K. M. Buchanan	5	0 8	400	..	30·71	159	123
D Mouswald (Schoolhouse)	Jas. F. Young, Esq.	8	0 10	115	..	29·80	182	124
D Dumfries (Crichton Roy. Inst)	C. C. Easterbrook, Esq., M.D.	5	1 0	140	36·8	28·22	166	108

DIVISION XII—SOUTHERN COUNTIES—(*con.*).

STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
DUMFRIES—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
3.—NITH & C.—(*con*).								
D Blackwood	T. W. Kennedy, Esq.	5	1 6	90	..	35·31	157	135
D Moniaive (Glencrosh)	Miss Macmillan	5	1 1	400	..	44·32	164	135
D Maxwelton House	Sir W. E. Laurie, Bt.	5	1 3	375	..	38·99	158	134
D Durrisdeer (Drumlanrig)	R. A. S. Ritchie, Esq.	5	0 9	191	43·6	38·18	206	127
4.—ANNAN. 367 sq. mi.								
D Dalton (Whitecroft)	Lady A. Maitland-Heriot	5	0 11	240	..	31·40	163	127
D Dalton (Kirkwood)	Captain J. Steel	5	1 0	250	..	34·80	228	128
M Lockerbie (Thornbank)	W. Murdoch, Esq.	5	1 0	259	..	35·41	..	..
D Gubhill School	The Head Mistress	5	1 0	560	..	38·55	177	143
D Evan Water School	Mrs. Grossart	5	1 0	560	..	42·16	171	128
5.—ESK. 275 sq. mi.								
D Eaglesfield (Springkell Gdns.)	Mr. Charles George	5	1 0	300	..	31·95	158	133
D Canonbie (Irvine House)	J. H. Milne Home, Esq.	5	0 9	200	..	33·11	174	128
D Langholm (Drove Road)	Mrs. Jackson	5	0 9	270	..	39·18	160	132
Langholm (Ewes)	Mrs. Lyall	5	1 0	445	53·4	39·54	..	..
D ESKDALEMUIR (Observatory) (+A)	The Superintendent	8	1 4	794	56·3	44·10	195	147
ROXBURGH. (Area, 666 sq. mi.)								
1.—NORTH TYNE. 6 sq. mi.								
2.—TWEED LOWER—Right Bank Tributaries. 57 sq. mi.								
3.—TWEED—Teviot & c. 431 sq. mi.								
D Hawick (WOLFELEE)	T. Lockie for Mrs. Browne	5	1 0	537	37·6	28·58	180	133
D Hawick (Branxholm Park)	C. W. Grieve, Esq.	5	0 6	457	33·4	27·94	158	138
d Todshawhaugh	R. J. Usher, Esq.	5	1 0	450	..	(25·00)	..	..
d Hawick (Dominican Priory)	Sister Mary Augustine	5	1 0	440	..	24·16	(178)	(114)
D Denholm (Spital Tower)	Mrs. G. Leadbetter	5	0 9	410	32·7	23·92	188	139
D Jedburgh (Jedneuk)	John S. Aikman, Esq.	5	1 0	271	26·3	23·04	167	115
D Jedburgh (Crailing)	Major J. A. Paton	5	1 0	190	..	21·12	174	117
D Ancrum (Monteviot)	Bertram Talbot, Esq.	5	1 0	210	29·8	20·52	168	115
Linton (Clifton Park)	T. R. B. Elliot, Esq.	5	1 0	250	..	22·95	..	..
D St. Boswells (Monksford)	Lt.-Col. A. Mitchell	5	0 11	320	26·9	20·16	158	113
4.—TWEED—Ettrick & c. 10 sq. mi.								
D Melrose (Asylum) *gauge* A	T. C. Mitchell, Esq.	5	0 6	480	31·4	20·79	162	119
D Melrose (Asylum) *gauge* B	T. C. Mitchell, Esq.	5	1 0	480	30·8	19·89	162	119
5.—TWEED—Gala. 6 sq. mi.								
6.—TWEED—Leader & c. 25 sq. mi.								
7.—TWEED, LOWER—Left Bank Tributaries. 25 sq. mi.								
D KELSO (BROOMLANDS)	J. C. Scott, Esq.	5	1 0	193	26·0	19·70	178	110
8.—ESK. 106 sq. mi.								
d Newcastleton Forest	Forestry Commission	5	1 0	700	48·5	39·39	..	..

DIVISION XIII—SOUTH-EASTERN COUNTIES.

SELKIRK. (Area, 268 sq. mi.)								
1.—TWEED—Teviot & c. 34 sq. mi.								
D Selkirk (Whitmuir Hall)	Miss M. E. Maxwell	5	1 6	800	32·5	24·37	194	121
2.—TWEED—Ettrick & c. 192 sq. mi.								
D Ettrick Manse	Rev. W. Addison	5	1 2	787	55·6	41·38	171	141
M Edinburgh W. W. (Meggat Hd.) 1.	Messrs. Leslie & Reid, C.E.	8	1 3	1496	54·5	(38·45)	..	..

DIVISION XIII—SOUTH-EASTERN COUNTIES.—(*con.*).

STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Rain-gauge: Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
SELKIRK—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
3.—TWEED, UPPER—Right Bank Tributaries. 17 sq. mi.								
4.—TWEED, UPPER—Left Bank Tributaries. 19 sq. mi.								
Galashiels (The Peel, Clovenfords)	W. R. Ovens, Esq.	5	1 0	450	35·5	25·95	..	..
5.—TWEED—Gala. 6 sq. mi.								
PEEBLES. (Area, 348 sq. mi.)								
1.—TWEED, UPPER—Right Bank Tributaries, 127 sq. mi.								
M Edin. WW (Ravenscraig)..3..	Messrs. Leslie & Reid, C.E..	5	1 3	2258	72·6	58·02	..	..
M Edin. WW (Gameshope Loch)..4..	Messrs. Leslie & Reid, C.E..	5	1 3	1860	70·6	(54·82)	..	..
M Edin. WW (Loch Craig Head) 2..	Messrs. Leslie & Reid, C.E..	5	1 0	2627	64·5	66·79?	..	..
M Edin. WW (Gameshope Farm) 5..	Messrs. Leslie & Reid, C.E..	5	1 3	1538	69·4	58·36?	..	..
M Edin. WW (Talla Linns Foot)..6..	Messrs. Leslie & Reid, C.E..	8	1 3	966	61·8	46·01	..	..
M Edin. WW (Quarter Hill).....7..	Messrs. Leslie & Reid, C.E..	8	1 3	1196	47·7	41·90	..	..
D Edin. WW (Victoria Lodge)...8..	Messrs. Leslie & Reid, C.E..	5	1 3	900	50·0	38·53	185	142
2.—TWEED, UPPER—Left Bank Tributaries. 192 sq. mi.								
D Stobo Castle.....	Mr. J. Finnie.....	5	1 0	594	34·9	32·38	175	134
D Peebles (Hydro.).....	R. Turner, Esq., O.B.E.....	5	0 9	700	..	28·23	237	154
D West Linton (Woodlea Cottage)...	Messrs. Leslie & Reid, C.E..	5	1 0	801	..	27·67	187	130
D West Linton (Cairnton)	Dr. R. Graham Yooll	5	1 0	820	..	29·31	178	143
D West Linton (Baddingsgill Res.) ..	A. Simpson, Esq.....	5	1 0	1100	..	34·63	213	151
3.—ESK. 23 sq. mi.								
D Eddlestone (Portmore Res.).....	Messrs. Leslie & Reid, C.E..	11	1 0	1007	..	31·21	213	145
4.—CLYDE—Right Bank Tributaries. 6 sq. mi.								
BERWICK. (Area, 457 sq. mi.)								
1.—TWEED—Gala. 6 sq. mi.								
2.—TWEED—Leader. 92 sq. mi.								
d Earlston (Cowdenknowes)	T. A. Mole, Esq.	5	1 0	300	..	21·23	..	..
M Lauder (Burncastle).....	J. G. S. Turnbull, Esq.....	5	1 0	900	30·2	25·19	..	..
M Earnscleugh Burn (Blythe Rig)...	J. G. S. Turnbull, Esq.....	5	1 0	1200	36·1	31·65	..	..
3.—TWEED, LOWER—Left Bank Tributaries. 115 sq. mi.								
Coldstream (Lochton).....	J. Aitchison, Esq.	5	1 0	151	25·9	20·68	..	..
D Swinton House (*Snowdon*)..(+A)..	Rev. A. E. Swinton.....	5	1 0	200	26·4	21·59	184	121
Whitsomehill	J. T. Craw, Esq.	5	0 8	245	26·0	19·36	..	..
4.—TWEED—Whiteadder. 164 sq. mi.								
D Marchmont House	P. Ross, Esq.	5	1 0	498	32·2	22·89	187	113
D Duns (Nisbet House Gdns.).....	Mr. W. Cowieson.....	5	1 0	290	26·8	21·90	193	132
D Duns (Oxendean).....	A. C. Fraser, Esq.....	8	0 7	600	..	23·65	166	128
D Duns Castle	F. S. Hay, Esq.	5	1 0	500	30·8	23·29	176	125
D Duns (Manderston).....	Mr. F. J. Marshall.....	5	1 6	356	30·7	24·09	203	136
5.—EAST COAST STREAMS. 80 sq. mi.								
St. Abb's Head.....	Comm'rs of N. Lighthouses.	8	5 6	212	23·6	20·62	..	..

DIVISION XIII—SOUTH-EASTERN COUNTIES—(*con.*).

STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
		in.	*ft. in.*	*ft.*	*in.*	*in.*		
EAST LOTHIAN (Area, 267 sq. mi.)								
1.—TWEED—Leader. 1 sq. mi.								
2.—TWEED—Whiteadder. 35 sq. mi.								
3.—EAST COAST STREAMS. 69 sq. mi.								
M Garvald (Donolly Reservoir)	A. Robertson, Esq., C.E.	5	1 0	550	32·8	23·66	..	..
M Garvald (Thorter Reservoir)	A. Robertson, Esq., C.E.	5	1 0	700	..	23·88	..	..
D Dunbar (Belhaven Hill)	W. Ingham, Esq.	..	..	..	24·2	19·61	169	122
D DUNBAR (Public Park)	The Town Council (Sir. W. Keith)	5	1 0	75	..	18·42	167	108
4.—TYNE & C. 114 sq. mi.								
Lammermuir H. (West Hopes)	J. Ross, Esq., C.E.	5	1 0	736	34·4	29·56	..	..
Lammermuir H. (Stobshiel Res.) B.	J. Ross, Esq., C.E.	5	1 0	950	33·0	27·41	..	..
Lammermuir H. (Stobshiel Res.) A.	J. Ross, Esq., C.E.	5	1 0	998	28·1	24·27	..	..
Lammermuir H. (Lammerloch Res.)	J. Ross, Esq., C.E.	5	1 0	900	..	25·81	..	..
5.—FIRTH OF FORTH. 48 sq. mi.								
d East Fortune Sanatorium	The Clerk of Works	5	1 4	101	23·5	16·87	..	102
d Dirleton	James Curr, Esq.	5	1 0	149	..	16·79	..	87
D North Berwick Reservoir	A. Robertson, Esq., C.E.	5	1 0	150	25·4	18·21	162	106
D NORTH BERWICK (Hospital)	A. Robertson, Esq., C.E.	5	1 0	118	24·1	17·17	146	102
6.—INSULAR.								
Fidra	Com'rs. of N. Lighthouses	..	..	..	21·0	(15·62)	..	..
MIDLOTHIAN. (Area, 369 sq. mi.)								
1.—TWEED—Gala. 68 sq. mi.								
M Stow (Cragdale)	J. Pringle, Esq.	5	0 6	642	*33·3*	23·19	..	..
2.—TYNE. 28 sq. mi.								
D Oxenfoord Castle Gardens	Mr. D. M. Welsh	5	1 6	409	*27·6*	21·47	159	112
3.—FIRTH OF FORTH. 3 sq. mi.								
4.—ESK. 116 sq. mi.								
M Moorfoot Hills (Bowbate) *old g.*	Messrs. Leslie & Reid, C.E.	11	0 6	1260	*46·6*	35·54	..	..
M Moorfoot Hills (Bowbate) *new g.*	Messrs. Leslie & Reid, C.E.	5	1 0	1260	..	35·51	..	..
D Moorfoot Hills (Gladhouse Res.)	Messrs. Leslie & Reid, C.E.	5	0 8	915	35·3	29·63	206	140
D Moorfoot Hills (Rosebery)	Messrs. Leslie & Reid, C.E.	5	0 9	750	..	24·77	172	126
D Moorfoot Hills (Edgelaw)	Messrs. Leslie & Reid, C.E.	5	0 10	654	..	24·58	171	122
D Gorebridge	W. S. B. Brown, Esq.	5	1 0	560	*29·5*	23·55	169	116
M Pentland Hills (Harehill)	Messrs. Leslie & Reid, C.E.	11	1 7	1297	..	27·41	..	..
D Pentland Hills (Martyrs Cross)	Messrs. Leslie & Reid, C.E.	5	1 0	750	..	26·14	181	131
D Pentland Hills (Loganlea)	Messrs. Leslie & Reid, C.E.	5	1 0	811	..	26·80	176	126
D Pentland Hills (Glencorse Fil.)	Messrs. Leslie & Reid, C.E.	5	1 0	638	..	26·11	169	130
D Pentland Hills (Glen Cottage)	Messrs. Leslie & Reid, C.E.	5	1 2	739	..	27·26	169	135
D Newbattle (Public School)	W. Fowler, Esq.	5	1 0	300	*26·1*	22·67	157	112
5.—ALMOND & C. 153 sq. mi.								
D Pentland Hills (Crosswood)	Messrs. Leslie & Reid, C.E.	5	1 0	950	..	32·37	213	137
D Pentland Hills (Harperrig)	Messrs. Leslie & Reid, C.E.	5	1 0	900	..	31·48	197	139
D Pentland Hills (Morton)	Messrs. Leslie & Reid, C.E.	5	1 0	749	..	29·10	200	131
d West Calder (Addiewell)	Scottish Oils, Ltd.	12	21 0	620	35·7	28·90	..	..
D BOGHALL (+A)	Edin. & E. of S. Coll. of Ag.	8	1 0	639	*31·4*	25·11	171	119
D BALERNO (SHOTHEAD)	A. B. Buchanan Smith, Esq.	5	1 0	..	..	28·50	169	129
D Pentland Hills (Harlaw Res.)	Messrs. Leslie & Reid, C.E.	5	1 0	800	..	24·50	172	123
M Pentland Hills (Bonally Res.)	Messrs. Leslie & Reid, C.E.	11	0 6	1112	..	28·40	..	..
D Pentland Hills (Clubbiedean Rs.)	Messrs. Leslie & Reid, C.E.	5	0 6	773	..	25·13	180	115
M Pentland Hills (Swanston)	Messrs. Leslie & Reid, C.E.	11	0 6	550	..	25·33	..	..
D Pentland Hills (Fairmilehead)	Messrs. Leslie & Reid, C.E.	5	1 0	590	..	24·98	171	116

DIVISION XIII—SOUTH-EASTERN COUNTIES—(*con.*).

STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Height of Ground above Sea Level.	Average Rainfall.	1933. Rainfall.	Days with ·01 in. or more.	Days with ·04 in. or more.
MIDLOTHIAN—(*con*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
5.—ALMOND & C.—(*con.*)								
D Liberton (Alnwick Hill)	Messrs. Leslie & Reid, C.E..	5	1 0	407	..	23·07	174	117
D Colinton (Firhill Tank)	Messrs. Leslie & Reid, C.E..	5	0 6	412	..	24·93	182	115
D Liberton (College Farm)	Edin. & E. of S. Coll. of Ag..	5	1 0	190	*27·2*	23·13	179	116
D Edinburgh (Blackford Hill)	The Astronomer Royal for Scot.	8	1 0	441	26·3	21·88	171	104
D Edinburgh (Univ. King's B.)	Prof. Sir T. Hudson Beare..	5	1 0	225	..	22·16	165	109
D Edinburgh (Gogar Park)	R. Cross, Esq.	5	1 0	155	..	25·64	170	106
D Edinburgh (Napier Road)	Mrs. H. G. Harrison	5	1 0	300	*26·0*	21·48	179	112
D Edinburgh (Corstorphine)	J. Laughton, Esq.	5	0 8	180	..	22·08	170	98
D Edinburgh (The Academy)	M. McC. Fairgrieve, Esq....	5	1 0	70	*25·3*	20·96	180	109
d Edinburgh (St. Roque)	Mr. H. B. Waugh	5	0 10	270	*26·6*	(24·05)	(182)	(116)
D Edinburgh (City Observatory)	J. McDougal Field, Esq....	8	1 0	348	*24·1*	20·63	179	103
D Edinburgh (Royal Botanic Gd.)	Prof. Sir W. Wright-Smith	8	0 7	74	*26·0*	20·13	146	99
D Davidson's Mains (Broomfield)	J. I. Balfour-Melville, Esq...	5	0 10	42	*24·7*	20·73	153	109
6.—CLYDE—Right Bank Tributaries. 1 sq. mi.								
WEST LOTHIAN (Area, 120 sq. mi.)								
1.—ALMOND & C. 60 sq. mi.								
M Uphall	No. 7. Messrs. Leslie & Reid, C.E..	8	1 4	790	..	25·88	..	..
M Uphall	No. 8. Messrs. Leslie & Reid, C.E..	8	1 4	577	..	25·04	..	..
M Uphall	No. 6. Messrs. Leslie & Reid, C.E..	8	1 4	680	..	25·40	..	..
M Uphall	No. 3. Messrs. Leslie & Reid, C.E..	8	1 2	711	..	25·99	..	..
d Uphall	Scottish Oils, Ltd.	8	0 10	380	*31·2*	24·68	(158)	(110)
D Uphall (Houstoun House)	J. W. Shairp, Esq.	5	1 0	420	..	25·13	192	124
Winchburgh (Hopetown Oil Wks.)	Scottish Oils, Ltd.	8	2 2	327	..	27·49	..	..
Dalmeny House	The Earl of Rosebery	5	1 0	50	..	23·38	..	..
2.—FORTH—Right Bank Tributaries.—59 sq. mi.								
D Bathgate (Filters)	No. 1. A. L. Reid, Esq.	5	0 9	640	*33·0*	26·55	159	117
M Bathgate (Petershill Res.)	No. 2. A. L. Reid, Esq.	5	0 9	710	*30·3*	21·06	..	..
M Bathgate (Ballencrieff R.)	No. 3. A. L. Reid, Esq.	5	0 9	792	*31·0*	23·38	..	..
M Torpichon (Lochcote)	Wm. Beattie, Esq.	5	0 9	550	*33·2*	29·94	..	..
D Uphall (Beecraigs)	Messrs. Leslie & Reid, C.E..	5	1 0	531	..	24·32	156	121
M Carribber Reservoir	Wm. Beattie, Esq.	5	0 9	350	..	24·82	..	..
D Linlithgow (Grange)	H. M. Cadell, Esq.	5	0 9	430	..	22·41	166	115
D Linlithgow (Preston House)	Mr. C. Blair	5	1 0	380	..	23·92	171	115
3.—CLYDE.—Right Bank Tributaries. 1 sq. mi.								

DIVISION XIV—SOUTH-WESTERN COUNTIES.

LANARK. (Area, 881 sq. mi.)								
1.—TWEED, UPPER—Left Bank Tributaries. 20 sq. mi.								
2.—ALMOND. 14 sq. mi.								
3.—FORTH—Right Bank Tributaries. 9 sq. mi.								
D Airdrie (Forrestburn Res.)	A. Simpson, Esq., C.E.	5	1 0	722	*36·6*	27·82	166	138
4.—CLYDE—Right Bank Tributaries. 378 sq. mi.								
D Crawford (Camps Res.)	Jas. McMillan, Esq.	11	0 10	969	..	36·82	184	152
D Crawford (Camps Res.) *new g* (+A)	Jas. McMillan, Esq.	5	0 10	969	..	36·53	184	152
D Crawford (Camps Res.) No. 3	Jas. McMillan, Esq.	11	0 10	968	..	37·01	184	152
M Coulter Reservoir	No. 1. L. Costley, Esq., C.E.	11	1 0	1250	..	(38·98)	..	..
Lamington (Cowgill Reservoir)	J. Chisholm, Esq., C.E.	5	1 0	1012	..	35·71	..	..
D Biggar (Shieldhill)	Miss Dunlop	5	1 0	850	*32·7*	27·27	190	132
D Lamington House	Rt. Hon. Lord Lamington..	5	1 0	730	*38·0*	33·79	191	134
Carluke (Coldstream Reservoir)	L. Costley, Esq., C.E.	11	1 0	800	*36·2*	30·05	..	..
Carluke	J. Barr, Esq.	5	0 5	640	..	25·95	..	..
Wishaw (Kirk Road)	J. Y. Scott, Esq.	6	1 0	480	*32·1*	24·78	..	..
Wishaw (Coronation Street)	A. Hinshelwood, Esq.	5	1 3	510	..	24·98	..	..
D Bothwell (Mt. Pleasant)	A. Muir, Esq.	5	1 0	150	..	24·01	141	100
Glasgow (Tollcross Park)	W. Besant, Esq.	5	0 6	85	*37·5*	27·00	176	125

DIVISION XIV—SOUTH-WESTERN COUNTIES.—(*cont.*).

STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
LANARK—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
4.—CLYDE—(*con.*).								
Glasgow Green	W. Besant, Esq.	5	0 6	35	*36·8*	28·79	171	135
Glasgow (Alexandra Park)	W. Besant, Esq.	5	0 6	141	*36·4*	25·41	170	117
D Glasgow (Riddrie)	K. McKenzie Topping, Esq.	5	1 0	252	..	26·94	181	123
Glasgow (Botanic Gardens)	W. Besant, Esq.	5	0 6	110	*35·5*	27·45	178	129
D Glasgow University	Prof. J. R. Currie, M.D., D.P.H.	8	1 0	85	*35·4*	25·81	175	117
Glasgow (Kelvingrove Park)	W. Besant, Esq.	5	0 6	48	*36·2*	28·64	153	120
Glasgow (Victoria Park)	W. Besant, Esq.	5	0 6	30	*36·8*	26·10	160	124
Glasgow (Ruchill Park)	W. Besant, Esq.	5	0 6	222	*36·1*	25·85	176	115
Glasgow (Springburn Park)	W. Besant, Esq.	5	0 6	352	*38·0*	29·17	204	146
Clarkston (Roughrigg Res.)	J. Chisholm, Esq., C.E.	5	1 0	664	..	29·51	..	..
D Airdrie (Broomknoll Street)	J. Chisholm, Esq., C.E.	5	1 0	402	*35·1*	26·98	171	123
D Gartcosh (Gartloch Hospital)	Mr. James McEwen	5	1 1	291	*38·0*	27·36	182	127
d Caldercruix (Hillend Res.)	Mr. Boyd Drummond	5	3 6	620	37·3	29·88	..	126
D Chryston School House	W. V. Forrest. Esq.	5	1 0	298	..	27·74	171	130
5.—CLYDE—Left Bank Tributaries. 448 sq. mi.								
Elvanfoot (Potrenick Burn)	L. Costley, Esq., C.E.	11	1 0	1018	*63·5*	51·40	..	..
Elvanfoot (Peden Reservoir)	L. Costley, Esq., C.E.	11	1 0	1030	*62·0*	45·55	..	..
D Douglas (Kilncroft)	The Earl of Home	8	1 1	696	*43·4*	35·34	187	135
D Strathaven (Glengavel Res.)	J. McMillan, Esq., C.E.	5	1 0	880	..	38·18	200	149
D Strathaven (Glengavel Res.) *new site*	J. McMillan, Esq., C.E.	5	1 0	839	..	43·04	200	150
d Coalburn	Auchlochan Colliery	5	1 3	735	..	32·54	..	..
D Symington (Birkwood)	Col. D. E. Brand, D.S.O.	5	1 6	750	..	29·45	175	133
D Strathaven (DUNGAVEL)	A. K. Foulis, for the Duke of Hamilton & Brandon	5	1 0	798	..	40·11	189	150
D Strathaven (Dunside Res.)	J. McMillan, Esq., C.E.	5	0 10	1010	..	43·70	203	154
D Strathaven (Dunside Res.) *new site*	J. McMillan, Esq., C.E.	5	1 0	1002	..	45·30	203	154
D Strathaven (Kype Res.)	George Allison, Esq.	5	1 0	941	..	42·44	188	146
W Lesmahagow (Auchtyfardle)	Major T. E. Lander	5	1 0	578	*37·0*	29·98	..	..
D Strathaven (East Overton Ho.)	H. Lee Dykes, Esq.	5	1 0	700	*43·8*	35·00	189	140
D Stonehouse (Sanatorium)	W. A. Chapman, Esq.	5	0 7	526	..	30·11	171	126
D Stonehouse (Glassford Filters)	J. McMillan, Esq., C.E.	5	0 9	775	..	35·29	212	143
D Hamilton W.W. (Townhill)	George Allison, Esq.	5	1 0	430	35·6	28·21	160	135
D Hamilton (Scott Street)	S. B. Becket, Esq.	5	1 6	260	*33·0*	26·91	156	108
D Hamilton (Woodlea)	W. Fletcher, Esq.	5	1 4	192	..	25·62	165	116
D THORNTONHALL	A. H. Bishop, Esq.	5	1 0	440	*38·4*	31·02	189	113
D Carmunnock (Carnbooth)	R. Robertson, Esq., C.E.	5	1 0	365	*39·3*	32·54	171	122
D Cambuslang (Greenlees Filters)	J. McMillan, Esq., C.E.	5	1 0	322	*35·6*	28·21	172	118
D Glasgow (Dumbreck)	W. Gillies, Esq., Jr., LL.B.	5	1 0	76	..	27·41	172	120
d Glasgow (Maxwell Drive)	Rev. F. C. Newbery	5	1 0	60	..	29·21	..	120
Glasgow (Bellahouston Park)	W. Besant, Esq.	5	0 6	160	*36·5*	30·17	183	126
Glasgow (Elder Park)	W. Besant, Esq.	5	0 6	40	*37·4*	29·68	174	129
6.—IRVINE. 2 sq. mi.								
7.—AYR. 1 sq. mi.								
8.—NITH. 2 sq. mi.								
9.—ANNAN. 7 sq. mi.								
AYR. (Area, 1,135 sq. mi.)								
1.—CLYDE—Left Bank Tributaries. 7 sq. mi.								
D Glengarnock (Chemical Works)	Messrs. Colvilles, Ltd.	8	15 0	105	54·4	36·60	174	127
2.—FIRTH OF CLYDE. 60 sq. mi.								
D Ardrossan (Burnfoot)	J. C. Duncan, Esq., C.E.	5	1 0	63	..	30·92	177	127
D Stevenston (Greenhead Filters)	W. G. Guild, Esq.	5	1 0	186	41·6	30·77	172	126
Ardrossan (Busbie Res.)	J. C. Duncan, Esq., C.E.	5	1 0	370	..	35·70	..	..
D Seamill	A. McDonald, Esq.	5	1 6	37	..	30·32	172	122
D West Kilbride School	Alex. M. Fleming, Esq.	5	1 0	200	..	32·21	177	132
West Kilbride (Crosbie Res.)	W. Gray, Esq. C.E.	5	1 0	400	..	33·49	..	..
D West Kilbride (Hunterston)	Lt.-Gen. Sir A. Hunter-Weston, K.C.B.	5	1 0	40	42·4	33·77	177	146
D Fairlie (Southannan)	H. W. Rowe, Esq.	5	1 0	10	..	40·13	190	148
Fairlie (Water Works)	W. Gray, Esq., C.E.	5	1 0	270	..	41·84	..	..
D Largs (Stevenson Institute)	G. Arkieson, Esq.	5	1 0	20	..	40·31	179	142
D Largs (Woodbank)	A. Simpson, Esq.	5	1 0	25	..	39·09	192	139
D Largs (Noddsdale)	H. P. Ramage, Esq.	5	0 10	200	..	46·26	194	144

DIVISION XIV—SOUTH-WESTERN COUNTIES—(*con.*).

	STATIONS.	AUTHORITIES.	Diam.	Rain-gauge Height of Rim above Ground.	Height of Ground above Sea Level.	Average Rainfall.	1933. Rainfall.	Days with ·01 in. or more.	Days with ·04 in. or more.
	AYR—(*con.*).		*in.*	*ft in.*	*ft.*	*in.*	*in.*		
	2.—FIRTH OF CLYDE—(*con.*).								
D	Largs (Middleton Filters)	G. Arkieson, Esq.	5	1 0	230	..	43·64	183	140
D	Skelmorlie (West Park)	J. Wilkinson, Esq.	5	1 6	150	53·5	42·19	184	147
M	Shaws W.W. (Knockencorsan) *new site*	J. MacAlister, Esq., C.E.	5	1 0	1040	..	60·40	..	..
M	Shaws W.W. (Largs Road)	J. MacAlister, Esq., C.E.	5	1 0	910	*57·0*	62·90	..	..
	3.—IRVINE & C. 296 sq. mi.								
D	Ayr (Heathfield)	Medical Officer of Health.	5	1 0	43	..	26·07	137	115
D	Prestwick	Burgh Surveyor.	5	1 0	17	..	24·63	158	114
D	Monkton (Orangefield)	H. Carrick Webster, Esq.	5	1 0	30	..	24·99	160	116
D	Prestwick (Ladykirk Filters)	F. Pritty, Esq., C.E.	6	1 2	179	..	27·79	182	129
D	Troon	The Town Council (M. S. Brodie, C.E.)	5	1 0	15	..	24·91	..	..
d	Symington	T. McMillan, Esq., M.A.	5	1 0	290	..	28·60	(169)	(125)
D	Hurlford (Carnell)	G. D. Findlay Hamilton, Esq.	5	1 0	300	..	28·27	159	121
D	Barassie (The Tower)	Mrs. Hutchison	5	1 0	12	..	25·27	175	121
	Troon (Collenan Reservoir)	M. S. Brodie, Esq., C.E.	5	1 0	203	..	27·90	..	..
D	Treesbank	Mr. T. Blacklock	5	1 0	150	..	32·56	183	132
D	Irvine (Gailes)	H. W. Aitken, Esq.	5	1 0	12	35·9	27·71	176	115
D	Cessnock Castle	J. Harling Turner, Esq.	5	1 0	360	..	35·89	180	135
D	Newmilns (Lanfine)	G. R. Shield, Esq.	5	1 6	500	..	39·22	201	144
D	Kilmarnock (Craig House)	Col. W. Pollock Morris.	5	1 0	70	..	29·14	165	127
D	Kilmarnock (The Mount)	J. L. Lawson, Esq.	5	0 9	100	..	34·54	275	136
D	Templetonburn	F. C Howie, Esq.	5	1 0	140	..	33·13	190	131
D	Darvel (Kirkland Park)	W. Dunbar, Esq., C.E.	5	1 0	350	..	40·87	203	157
	Raithhill	W. Dunbar, Esq., C.E.	5	1 0	640	..	42·24	..	..
D	Kilmarnock (Grange Sch.)	P. Muir, Esq.	5	1 0	130	..	33·07	200	141
D	Kilmarnock (Kay Park)	W. Dunbar, Esq., C.E.	5	4 0	132	..	32·16	177	133
D	Kilmarnock (Dean Castle)	J. Middleton, Esq.	5	1 0	190	40·7	32·70	181	140
D	Irvine (Cuninghame Home)	J. Gillespie, Esq.	5	1 0	24	..	29·61	173	129
D	Kilmarnock (North Craig Res.)	W. Dunbar, Esq., C.E.	5	1 0	319	41·2	34·69	189	145
D	Montgreenan Gardens	A. Dow ,Esq.	5	1 3	180	..	34·24	183	145
	Fenwick (Whiteliehill)	W. Dunbar, Esq., C.E.	5	1 0	915	..	41·02	..	..
D	Fenwick (Hareshaw Lodge)	E. Richmond Paton, Esq.	5	1 0	600	48·5	38·77	156	148
	Croilburn	W. Dunbar, Esq., C.E.	5	1 0	725	..	40·14	..	..
D	Fenwick (Amlaird Filters)	W. Dunbar, Esq., C.E.	5	1 0	590	43·3	37·06	197	141
D	Balgray Mill	W. Dunbar, Esq., C.E.	5	1 0	550	..	37·52	184	148
	Craigendunton Reservoir	W. Dunbar, Esq., C.E.	5	1 0	805	46·4	41·47	..	..
	Loch Goin Reservoir	W. Dunbar, Esq., C.E.	5	1 0	865	49·4	43·36	..	..
D	Blair Gardens	W. Dunbar, Esq., C.E.	5	1 0	155	..	39·04	182	144
	Moor Farm	W. Dunbar, Esq., C.E.	5	1 0	810	..	42·19	..	..
D	Stewarton Filters	C. M. L. Bodie, Esq.	5	1 0	515	..	36·32	188	144
D	Kirkland (Dunlop)	R. Clement, Esq.	5	1 0	400	..	39·57	(167)	(143)
D	Dalry (Munnoch Reservoir)	W. G. Guild, Esq.	5	1 0	325	47·9	38·78	192	142
D	Dalry (Caaf Reservoir)	W. G. Guild, Esq.	5	1 3	515	53·2	41·65	194	148
D	Dalry (Birkheadsteel)	W. G. Guild, Esq.	5	1 0	520	..	44·26	194	155
D	Dalry W.W. (Filters)	W. Gray, Esq., C.E.	5	1 0	320	46·5	41·58	187	155
D	Dalry (Templand)	A. Shanks, Esq.	5	1 0	154	..	38·15	180	143
	Dalry W.W. (Thirdpart)	W. Gray, Esq., C.E.	5	1 0	560	52·0	40·12	..	..
	Dalry (Camphill Reservoir)	James Lee, Esq., C.E.	5	1 0	611	..	51·86	..	..
D	Beith (Filter Station)	W. Gray, Esq., C.E.	5	1 0	412	54·5	40·86	186	150
D	Kilbirnie (Hole House Filters)	W. Gray, Esq., C.E.	5	1 0	377	..	50·31	206	155
M	Kilbirnie (Pundeavon Res.)	W. Gray, Esq., C.E.	11	1 0	898	..	63·12	..	..
	4.—AYR. 222 sq. mi.								
	Cumnock Waterworks	W. Dunbar, Esq., C.E.	5	1 0	500	..	31·97	..	..
D	Ayr Cemetery	J. Young, Esq., C.E.	5	1 0	40	34·8	27·35	149	117
D	Annbank House	Jas. Dickie, Esq.	5	1 0	240	..	30·13	176	128
D	Auchincruive	W. Scotland Agric. Coll.	8	1 0	89	..	27·93	176	115
D	Catrine	Messrs. J. Findlay & Co.	6	1 0	300	..	32·53	(183)	(136)
D	Montgomerie	T. Allan Arthur, Esq.	5	1 0	340	..	32·30	178	129
D	Muirkirk (Kaimshill)	Dugald Baird, Esq.	5	1 6	750	43·4	38·25	198	158
D	Mauchline (Hillhead Tank)	W. Gray, Esq., C.E.	5	1 0	564	..	32·13	159	127
	Sorn (Blackside Water Tank)	W. Gray, Esq., C.E.	5	1 0	840	..	(35·25)	..	..
	5.—DOON. 119 sq. mi.								
W	Loch Finlas	J. Young, Esq., C.E.	5	1 0	849	55·1	33·11	..	..
D	Dalmellington (Mossdale Filters)	W. Gray, Esq., C.E.	5	1 0	764	..	33·65	210	135
D	Dunaskin (Ardoon)	David L. McCardel, Esq.	5	1 0	686	..	34·83	191	134
D	Patna (Kerse Filters)	W. Gray, Esq., C.E.	11	1 0	743	44·1	30·77	142	122

DIVISION XIV—SOUTH-WESTERN COUNTIES—(*con.*).

STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
AYR—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
5.—DOON—(*con.*).								
D Maybole (Otterden)	Robert Cross, Esq.	5	1 3	314	..	31·38	168	127
D Dalrymple (Knockjarder W.W.)	J. Young, Esq., C.E.	5	1 6	287	..	27·97	158	125
D Ayr (Doonholm)	Col. N. Kennedy, D.S.O.	5	1 0	90	38·8	32·60	180	133
D Alloway (Doonside)	J. Ferrier, Esq.	5	1 5	99	..	34·17	196	132
6.—CULZEAN BAY & C. 32 sq. mi.								
D Turnberry (Hotel)	Resident Manager	5	1 0	30	..	25·50	143	106
D Maybole (Culzean Castle Gdns)	Mr. W. J. Orr	8	1 3	138	36·4	29·98	151	120
7.—GIRVAN. 105 sq. mi.								
Girvan (Glendoune Gardens)	Mr. J. Simons	5	1 0	100	41·8	34·23	156	..
Loch Bradan	M. S. Brodie, Esq., C.E.	11	0 10	990	57·6	39·66	..	..
8.—STINCHAR & C. 155 sq. mi.								
d Glenapp Castle Gardens	Mr. A. W. Taylor	5	0 7	100	..	39·02	147	134
D Ballantrae (Windyknowe)	Capt. J. M. Borland, C.B.,D.S.O.	5	1 0	62	..	30·44	176	128
D Colmonell (Knockdolian)	A. Ogg for Capt. McConnell	5	1 0	170	44·8	32·89	170	132
d Pinwherry (Alticane)	D. I. W. Gray, Esq.	5	1 0	200	51·4	(35·91)	..	..
D Girvan (Pinmore)	Major E. C. Maxwell	5	0 5	207	49·8	34·53	192	132
D Barr (Alton Albany)	Lt.-Cdr. G. Hughes-Onslow, D.S.C.	5	1 6	330	..	34·91	170	134
9.—LOCH RYAN. 12 sq. mi.								
10.—LUCE BAY. 15 sq. mi.								
d Ballantrae (Lagafater Lodge)	Cedric R. Boult, Esq.	5	0 11	792	64·8	50·38	..	152
11.—CREE. 40 sq. mi.								
12.—DEE. 9 sq. mi.								
13.—NITH. 62 sq. mi.								
Afton Res. (Afton Water)	W. Gray, Esq., C.E.	5	1 0	1525	..	69·13	..	..
Afton Res. (Alwhat Burn)	W. Gray, Esq., C.E.	5	1 0	1435	..	67·84	..	..
Afton Res. (Montraw Burn)	W. Gray, Esq., C.E.	5	1 0	1554	..	63·20	..	..
Afton Res. (Montraw)	W. Gray, Esq., C.E.	5	1 0	1372	..	63·10	..	..
Afton Res. (Green Burn)	W. Gray, Esq., C.E.	5	1 0	1415	..	70·81	..	..
D Afton Res. (Filters) (+A)	W. Gray, Esq., C.E.	5	1 0	1328	..	66·33	214	158
D Glen Afton (Ayr Sanatorium)	Dr. E. E. Prest	5	1 0	850	53·2	44·92	199	142
D New Cumnock (Power Stn.)	New Cumnock Collieries, Ltd.	5	1 0	764	..	36·26	164	124
14.—INSULAR. 1 sq. mi.								
Ailsa Craig	Com'rs. of N. Lighthouses	5	1 0	35	27·0	22·20	..	..
RENFREW. (Area, 241 sq. mi.)								
1.—CLYDE—Right Bank Tributaries. 3 sq. mi.								
2.—CLYDE—Left Bank Tributaries. 194 sq. mi.								
Gorbals Dist.W.W. (Nether Cairn)	G. Henshilwood, Esq., C.E.	12	0 5	700	*57·2*	39·70	..	..
Gorbals Dist.W.W. (Middleton)	G. Henshilwood, Esq., C.E.	12	0 5	550	*55·8*	33·55	..	..
Gorbals Dist.W.W. (Ryat Lynn)	G. Henshilwood, Esq., C.E.	8	0 5	310	*49·0*	33·65	..	..
Gorbals Dist.W.W.(Waulk Glen)	G. Henshilwood, Esq., C.E.	12	0 5	280	47·2	34·05	..	..
Paisley W. W. (Muirhead)	James Lee, Esq., C.E.	12	1 0	482	..	43·66	..	..
Paisley W. W. (Springside)	James Lee, Esq., C.E.	12	1 0	532	..	43·86	..	..
Paisley W.W.(Back Thornlymuir)	James Lee, Esq., C.E.	12	1 0	646	50·9	42·93	..	..
Paisley W.W. (Stanely)	James Lee, Esq., C.E.	12	1 0	190	..	(29·60)	..	..
D Howwood (Midton House)	A. D. McNab, Esq.	5	1 3	232	..	42·17	153	136
Pollokshaws (Rouken Glen)	W. Besant, Esq.	5	0 6	156	..	31·83	177	123
Glasgow (The Linn Park)	W. Besant, Esq.	5	1 0	180	..	29·38	157	133
D Pollokshaws (Pollok House)	Sir J. Stirling Maxwell, Bt.	5	1 0	50	..	28·72	180	123
D Glasgow (Queens Park)	W. Besant, Esq.	8	0 9	145	36·1	28·18	189	117
Glasgow (Maxwell Park)	W. Besant, Esq.	5	0 6	69	..	27·18	165	121
D Kilbarchan (Milliken Park)	M. Douglas Anderson, Esq.	5	1 0	80	..	37·96	160	143
D Kilbarchan (Glentyan)	R. H. Hunter, Esq.	8	3 9	285	..	42·46	202	144
D Paisley (Coats Observatory)	Obs. Com. (J. Woodrow)	8	1 0	106	40·7	30·56	180	122
D Houston Manse	Rev. George Muir	5	1 0	103	..	36·85	184	138
§ Shaws W.W. (Duchal Moor) *new g*	J. MacAlister, Esq. C.E.,	5	1 0	1150	..	63·80	..	..
§ Shaws W.W. (Creuch Hill) *new g*	J. MacAlister, Esq., C.E.	5	1 0	1350	..	60·80	..	..
M Shaws W.W. (Green Water)	J. MacAlister, Esq., C.E.	5	1 0	788	*68·1*	56·80	..	..
D Renfrew Abbotsinch (Aerodrome) (+A)	Meteorological Officer	8	1 0	33	37·0	28·40	172	114
D Kilmacolm W.W.	James Grier, Esq.	5	1 0	600	..	53·91	208	153
D Kilmacolm Village	James Grier, Esq.	5	1 0	300	..	45·72	209	149

§ Turf wall round gauge.

DIVISION XIV—SOUTH-WESTERN COUNTIES—(*con.*).

STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
RENFREW—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
2.—CLYDE—Left Bank Tributaries—(*con.*).								
Bishopton (Dargavel)	Cap . A. Hall-Maxwell	5	1 0	33	..	32·80	..	..
D Shaws W.W. (Gryfe Reservoir)	J. MacAlister, Esq., C.E....	5	1 0	640	*65·1*	50·17	194	153
D Shaws W.W. (Mansfield)	J. MacAlister, Esq., C.E....	5	1 0	573	*64·5*	49·20	193	154
M Shaws W.W. (Darndaff Moor)	J. MacAlister, Esq., C.E....	5	1 0	850	*65·7*	49·10	..	..
3.—FIRTH OF CLYDE. 34 sq. mi.								
W Shaws W.W. (Kelly Dam)	J. MacAlister, Esq., C.E. ..	5	1 0	640	63·6	54·00	..	..
Inverkip (Daff Burn Reservoir)	Alex. Duthie, Esq.	8	1 0	506	..	52·25	..	..
W Dougliehill Filters (Pt. Glas. W.W.)	James Murray, Esq., C.E...	8	1 6	540	..	39·82	..	..
W Parkhill Filters (Pt Glas. W.W.)	James Murray, Esq., C.E...	8	1 6	275	..	37·10	..	..
D§Shaws W.W. (Compens. Res.)*new g*	J. MacAlister, Esq., C.E...	5	1 0	600	..	55·04	213	173
D Shaws W.W. (Loch Thom)	J. MacAlister, Esq., C.E....	5	1 0	643	65·4	56·07	214	169
W Shaws W.W. (Shielhill)	J. MacAlister, Esq., C.E....	5	1 0	962	*65·7*	57·40	..	..
D Shaws W.W. (New Yett's Dam)	J. MacAlister, Esq., C.E....	5	1 0	800	*65·0*	49·74	219	164
W Shaws W.W. (Spango Burn)	J. MacAlister, Esq., C.E....	5	1 0	757	*65·1*	54·90	..	..
D Shaws W.W. (Hole Glen)	J. MacAlister, Esq., C.E....	5	1 0	603	*62·2*	48·96	209	161
D Greenock (Prospect Hill) (+A)	J. MacAlister, Esq., C.E. ..	5	1 0	199	61·6	43·22?	193	154
D Gourock (Coves Reservoir)	Alex. Duthie, Esq.	5	1 0	221	..	45·21	181	147
4.—IRVINE. 10 sq. mi.								

DIVISION XV—WEST MIDLAND COUNTIES.

DUMBARTON. (Area, 270 sq. mi.)								
1.—FORTH—Right Bank Tributaries. 10 sq. mi.								
2.—FIRTH OF CLYDE & COWAL. 52 sq. mi.								
D Cardross (Kilmahew)	Claud A. Allan, Esq.	5	1 0	130	*44·7*	35·35	198	142
D Helensburgh (Ferniegair)	J. N. Stirling, Esq., C.E. ..	5	1 0	21	49·7	39·75	194	151
D Helensburgh (Valve House)	J. N. Stirling, Esq., C.E. ..	8	1 0	293	53·0	43·37	207	158
D Rosneath Castle Gardens	Mr. J. Dawson	5	0 4	33	*50·7*	40·68	200	149
Garelochhead (Gartnod)	M. J. M. Robertson, Esq. ..	5	1 4	10	..	46·50	..	..
D Garelochhead (Ardarroch Gdns)	F. A. Bush, Esq.....	5	1 0	100	..	57·70	216	158
D Arrochar (Benreoch Tighness)	Mrs. D. Little	5	1 0	50	..	68·28	214	174
D Arrochar (Braeside)	J. Lindsay, Esq.	5	1 0	40	*74·6*	61·02	210	169
3.—CLYDE—Leven. 149 sq. mi.								
D Renton (Carman Filters)	W. Buchanan, Esq.....	8	4 0	292	*47·6*	35·34	174	140
Loch Lomond Park	W. Besant, Esq.	5	1 0	156	*49·5*	40·64	190	..
Helensburgh (Blairnairn) No. 1	J. N. Stirling, Esq., C.E. ..	8	1 0	575	..	60·27	..	..
Helensburgh (Blairnairn) No. 2	J. N. Stirling, Esq., C.E. ..	5	1 0	1250	..	53·11	..	..
Helensburgh (Blairnairn) No. 3	J. N. Stirling, Esq., C.E. ..	5	1 0	1580	..	53·20	..	..
M Glen Finlas Reservoir.....No. 1.	George Beaton, Esq.....	5	1 1	782	*69·1*	52·28	..	..
M Glen Finlas Reservoir.....No. 2.	George Beaton, Esq.....	5	1 6	1194	*67·0*	56·21	..	..
M Glen Finlas Reservoir.....No. 3.	George Beaton, Esq.....	5	1 5	1627	*75·2*	62·15	..	..
M Glen Finlas Reservoir.....No. 4.	George Beaton, Esq.....	5	2 0	2040	*73·6*	59·80	..	..
M Glen Finlas Reservoir.....No. 5.	George Beaton, Esq.....	5	0 10	1635	*64·6*	51·35	..	..
M Glen Finlas Reservoir.....No. 6.	George Beaton, Esq.....	5	1 0	1172	*62·8*	52·54	..	..
4.—CLYDE—Right Bank Tributaries. 59 sq. mi.								
D Drumchapel (Wastdale)	F. C. Thomson, Esq.....	5	1 0	49	*38·5*	27·61	201	126
W Bearsden (Glengarnock)	A. Lithgow, Esq.....	8	1 0	132	*40·4*	29·48	..	..
Bearsden (Torran Môr)	J. Lewis Ferguson, Esq. ...	5	1 0	224	..	27·02	..	..
D Gartshore Gardens	Mr. Hugh Black	5	1 0	261	..	29·41	190	146
D Milngavie (Dougalston)	Mr. J. Hamilton	5	1 0	150	*43·7*	30·90	179	145
D Duntocher (Cochno Filters)	E. T. Collins, Esq., C.E.....	5	1 0	400	*43·7*	32·63	158	130
Kilpatrick Hills (Greenside Res.)	E. T. Collins, Esq., C.E.	5	1 0	876	*50·8*	39·11	..	..
Kilpatrick Hills (Loch Cochno)	E. T. Collins, Esq., C.E.....	5	1 0	909	*52·4*	37·01	..	..
Kilpatrick Hills (Jaw Reservoir)	E. T. Collins, Esq., C.E.....	5	1 0	912	*52·7*	41·13	..	..
STIRLING. (Area, 463 sq. mi.)								
1.—FORTH—Right Bank Tributaries. 263 sq. mi.								
D Polmont (Vellore)	R. M. W. Brown, Esq.	5	1 0	320	*36·3*	23·60	151	122
d Polmont (Carhowden)	T. B. G. Harvey, Esq.....	5	1 0	110	..	23·15	..	..
D Falkirk (Inglewood, Laurieston)	Miss H. S. D. Ballantine....	5	1 0	133	*36·6*	26·24	158	133
D Falkirk (Westbank).... *Garden*	A. Nimmo, Esq.	5	1 0	75	*37·6*	25·60	161	126

§ Turf wall round gauge.

DIVISION XV—WEST MIDLAND COUNTIES—(*con.*).

STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Rain-gauge: Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
STIRLING—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
1.—FORTH—Right Bank Tributaries—(*con.*).								
D Falkirk (Westbank) .... *Lawn*....	A. Nimmo, Esq.	5	1 0	105	*36·5*	23·97	161	125
D Falkirk (Arnotdale).....	W. Gibson, Esq.....	5	1 0	105	*37·4*	25·07	164	125
Falkirk (Kerse)	George Smith, Esq.....	5	1 0	18	31·9	22·13	..	..
Falkirk (Kerse) *new g*.....	George Smith, Esq.....	5	1 0	18	..	22·64	..	..
d Grangemouth (Burgh Stables)	J. C. Wallace, Esq., C.E.....	5	1 0	15	*31·8*	21·61	..	..
M Little Denny Reservoir	Stirling & Falkirk W.Bd. .	8	1 0	326	*43·1*	29·58	..	..
Little Denny Reservoir *new g.*	Stirling & Falkirk W.Bd....	5	1 0	..	..	28·94	..	..
M Little Denny Filters	Stirling & Falkirk W.Bd....	8	1 0	243	*42·2*	29·99	..	..
M Kilsyth (Faughlin Res.)	Stirling & Falkirk W.Bd....	8	1 0	707	*55·2*	41·83	..	..
Denny (Buckieburn Reservoir) ...	Stirling & Falkirk W.Bd....	8	1 0	825	*45·9*	31·04	..	..
Denny (Buckieburn Filters)	Stirling & Falkirk W.Bd....	8	1 0	760	*43·3*	27·24	..	..
M Earlsburn Reservoir	Stirling & Falkirk W.Bd....	8	1 0	1202	*58·0*	43·91	..	..
D Stirling (North Third Res.).....	J. C. Wallace, Esq., C.E.....	8	1 0	560	*44·8*	35·86	193	140
D Stirling (Touch Res.) .... No. 3 ..	A. H. Goudie, Esq.....	8	1 0	759	*47·7*	36·08	195	135
D Stirling (Touch Res.) .... No. 2 ..	A. H. Goudie, Esq.....	8	1 0	707	*47·1*	34·89	195	135
D Stirling (Touch Res.) .... No. 1 ..	A. H. Goudie, Esq.	8	1 0	455	*47·6*	36·27	195	135
d Polmaise Castle Gardens	Mr. J. McAndie.....	5	1 1	220	..	30·95	..	110
w Touch Gardens	Mr T. Davidson	5	1 0	90	..	33·03	..	..
Endrick Lodge.....	W. M. Wallace, Esq.	5	1 0	136	..	(28·03)	..	..
D STIRLING (Sauchie House)	The Town Council (J. Fyfe)	5	1 0	151	*36·5*	26·18	155	120
Stirling (Westerlands)	J. W. Drummond, Esq.....	5	1 0	110	*36·9*	(27·53)	..	..
D Stirling (Craigforth)	A. J. Couper, Esq.....	5	1 0	32	*39·1*	28·11	222	124
d Bucklyvie (Gartinstarry).....	C. Stirling, Esq.....	5	1 0	150	..	34·36	..	..
D Gargunnock House	C. Stirling, Esq.	5	1 0	85	*43·4*	31·65	177	119
D Kippen (Arngomery)	Mr. A. Leitch.....	5	4 6	150	*47·5*	34·16	182	125
Meiklewood	J. McNaughton, Esq.	5	1 0	35	..	27·82	..	..
w Duchray Valley (Ben Lomond)....	G. Henshilwood, Esq., C.E..	8	0 6	1500	*88·0*	66·10	..	..
w Duchray Valley (Glen Dhu)	G. Henshilwood, Esq., C.E..	8	1 0	500	*83·8*	61·60	..	..
w Duchray Valley (Comer)	G. Henshilwood, Esq., C.E..	8	1 0	600	*88·0*	66·00	..	..
w Duchray Valley (Achaidh Burn) ..	G. Henshilwood, Esq., C.E..	8	1 0	1200	*97·4*	74·35	..	..
w Duchray Val. (Hd. of Main Stream).	G. Henshilwood, Esq., C.E..	8	1 0	950	*92·8*	68·25	..	..
2.—FORTH—Teith. 5 sq. mi.								
d Stronachlachar (Invergyle).....	G. Henshilwood, Esq., C.E..	8	1 0	376	*82·4*	67·50	193	..
3.—FORTH—Left Bank Tributaries. 15 sq. mi.								
D Bridge of Allan (The Lea).....	Mr. W. Watt	5	0 8	100	*35·9*	24·51	202	132
D Bridge of Allan (Langlands).....	W. H. Gillespie, Esq.....	5	1 0	45	..	24·55	159	121
4.—CLYDE—Leven. 128 sq. mi.								
Strathblane (Blanefield).....	G. Henshilwood, Esq. C.E...	8	1 0	250	*50·5*	36·05	..	..
w Loch Arklet (Corriehichon).....	G. Henshilwood, Esq., C.E..	8	0 6	870	*89·3*	64·50	..	..
w Loch Arklet (Corriearklet).....	G. Henshilwood, Esq., C.E..	8	0 6	950	*90·2*	65·80	..	..
5.—CLYDE—Right Bank Tributaries. 52 sq. mi.								
Strathblane (Mugdock Res.).....	G. Henshilwood, Esq., C.E..	8	0 6	320	46·2	33·85	..	..
D Milngavie (Eastertoun).....	Major R. M. Ker	5	1 0	450	*45·0*	32·68	178	132
Kilpatrick H. (Burncrooks Res.)..	E. T. Collins, Esq.....	5	1 0	835	*49·5*	33·52	..	..
d Kilsyth (Queenzieburn)	W. Scott, Esq.	5	1 0	175	..	30·95	(156)	(132)
D Kilsyth (Innsbridge).....	J. I. Little, Esq.....	5	4 6	197	*47·3*	34·90	237	154
D Lennoxtown.....	W. R. Patterson, Esq.....	5	1 0	200	..	37·70	185	147
BUTE. (Area, 218 sq. mi.)								
1.—ISLE OF BUTE. 50 sq. mi.								
D ROTHESAY (Ardencraig)	J. Davidson & the Town Clerk	5	1 0	200	49·0	44·16	214	180
D Port Bannatyne (Ettrickdale).....	Lt.-Col.M.R.Gray Buchanan	5	1 0	160	..	46·27	219	179
2.—CUMBRAES. 4 sq. mi.								
D Millport (St. Andrew's Home)	Dr. J. H. Paul	5	0 9	12	..	34·54	174	139
D Millport (Marine Biog. Stat.).....	R. Elmhirst, Esq.....	5	1 0	16	..	33·49	183	143
Millport (Water Works).....	J. Dymock, Esq. 10		3 6	167	..	35·72	..	..
3—ARRAN. 164 sq. mi.								
Holy Island (Pillar Rock).....	Com'rs. of N. Lighthouses..	5	0 11	68	48·6	34·21	156	130
D Dougarie Lodge.....	David Reside, Esq.....	5	1 0	10	46·0	38·50	178	144
D Corrie Manse.....	Rev. James Brown.....	5	1 0	20	70·8	52·10	183	144

DIVISION XV—WEST MIDLAND COUNTIES—(*con.*).

STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
ARGYLL. (Area, 3,181 sq. mi.)		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
1.—TAY—Tummel. 36 sq. mi.								
2.—SOUND OF ARISAIG, SOUND OF MULL & C. 317 sq. mi.								
D Morvern (ARDTORNISH)	A. Cameron for O. H. Smith, Esq.	5	1 0	48	*93·3*	63·51	183	172
D Morvern (Drimnin)	Mrs. Gordon	5	1 0	225	*62·7*	52·52	217	190
D Loch Sunart (Glenborrodale)	A. M. Fletcher, Esq.	5	1 0	30	69·0	61·29	198	180
D Acharacle (Shielbridge)	A. M. Fletcher, Esq.	8	3 0	51	*68·2*	56·86	210	189
d Loch Shiel (Polloch House)	Forestry Commission	5	1 8	32	*83·5*	75·25	..	158
3.—LOCH LINNHE—Right Bank Tributaries. 139 sq. mi.								
D Morvern (Kingairloch)	Mrs. G. H. Strutt	5	1 0	40	*98·2*	85·88	207	183
Corran Lighthouse	Com'rs. of N. Lighthouses	5	1 0	13	81·0	70·38	203	186
D Ardgour House	Maclean of Ardgour	5	0 10	60	*90·0*	83·36	248	195
4.—LOCH LINNHE.—Left Bank Tributaries. 165 sq. mi.								
d Barcaldine	Forestry Commission	5	1 0	50	65·9	57·82	(187)	(175)
D Duror (Achara)	W. D. Stewart, Esq.	5	1 2	45	70·7	58·27	208	173
D Glencoe Gardens	Mr. J. B. Crichton	8	1 0	85	..	66·64	213	178
Glenleven (Blackwater House). 4..	British Aluminium Co. Ltd..	8	1 0	1069	80·8	66·80	..	..
D Glenleven (Blackwater Dam, S.) 2(+A)	British Aluminium Co. Ltd.	8	1 0	1072	84·0	75·71	234	190
D Glenleven (Kinlochleven) .....1..	British Aluminium Co. Ltd..	8	1 0	140	86·4	75·75	200	185
5.—LOCH ETIVE. 197 sq. mi.								
D Glen Etive	W. D. Fordyce, Esq.	..	1 0	200	94·0	83·81	220	191
6.—LOCH ETIVE—Loch Awe. 319 sq. mi.								
d Bridge of Orchy (Inveroran)†	Resident Engineer	5	1 0	580	*83·5*	64·39	(159)	(147)
7.—FIRTH OF LORNE. 112 sq. mi.								
d Kilmelfort (Arduaine)	Mrs. Campbell of Arduaine .	5	0 10	23	*57·6*	59·43	..	182
D Kilmelfort (Ardmaddy C.) ..	Rt. Hon. The Earl of Breadalbane	5	1 0	70	..	56·47	200	160
w Oban (Gleann-a-Bhearraidh Res.) .	D. Galloway, Esq.	8	1 6	400	*57·5*	(50·44)	..	..
D OBAN	D. Galloway, Esq.	8	1 0	229	..	45·90	211	172
8.—SOUND OF JURA. 163 sq. mi.								
D Lochgilphead (Poltalloch)	Mr. D. S. Melville	5	1 6	135	52·7	50·15	207	187
9.—KINTYRE, WEST. 146 sq. mi.								
Mull of Kintyre	Com'r. of N. Lighthouses	5	1 0	270	41·1	34·22	..	..
D Largie Castle	Mrs. Moreton Macdonald	5	1 1	160	*48·4*	36·56	197	146
10.—KINTYRE, EAST. 177 sq. mi.								
Campbeltown (South Park)	J. A. Gardiner, Esq.	8	0 10	20	*50·6*	42·07	192	157
D Carradale (Torrisdale Castle)	Major W. Macalister Hall	5	1 0	84	*62·6*	54·08	190	161
D Skipness Castle	R. F. Graham, Esq.	5	1 0	14	..	40·00	176	153
11.—LOCH FYNE. 264 sq. mi.								
D Ardlamont (Kilbride)	J. W. Turnbull, Esq.	5	1 0	110	*49·0*	41·72	169	139
Otter Ferry (Ballimore)	Lt.-Col. J. MacRae-Gilstrap.	5	0 10	70	*52·1*	47·43	..	..
D Ardrishaig (Canal Office)	E. A. Bly, Esq., C.E.	5	1 0	48	*67·9*	56·22	200	176
D Crarae Lodge	Capt. G. I. Campbell	5	1 0	20	*68·2*	57·51	208	178
D Strachur Park	Lady G. Campbell	5	1 8	25	*66·7*	59·86	211	183
D Inveraray Castle Gardens	A. R. Page, Esq.	5	1 0	40	*77·2*	69·40	193	173
D Ardkinglas	J. R. Taylor, Esq.	8	1 6	37	*70·8*	62·68	230	179
12.—FIRTH OF CLYDE & COWAL. 242 sq. mi.								
D Toward (Knockdow Gardens)	Sir Norman Lamont, Bt.	5	1 6	101	*59·7*	47·86	204	164
D Toward (Inverchaolain)	Sir Norman Lamont, Bt.	5	1 0	..	*67·9*	57·92	205	173
D Ardnadam (Hafton Ho.)	R. Allan, Esq.	5	1 0	73	*76·5*	60·83	187	165
D DUNOON (Benmore Forest Sch.)	Forestry Commission	5	1 0	46	..	68·96	211	177
D Loch Eck (Benmore)	H. G. Younger, Esq.	5	1 3	40	*86·6*	71·23	207	178
D Strachur (GLENBRANTER)	Forestry Commission	5	1 0	188	*88·2*	70·90	179	165
Lochgoilhead (Ardgoil)	W. Besant, Esq.	5	0 6	20	*86·3*	70·32	219	170
d Lochgoilhead (Nuthill)	Mrs. Henderson	5	1 0	15	*74·8*	59·01	..	..
D Glencroe (Guithas Cottage)	J. M. Reid, Esq.	5	1 2	120	*101·0*	73·40	202	171
13.—CLYDE—Leven. 4 sq. mi.								

† Gauge moved May 1st 2 miles E.N.E.

DIVISION XV—WEST MIDLAND COUNTIES—(*con.*).

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ARGYLL—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
14.—INSULAR. 900 sq. mi.								
Sanda Lighthouse	Com'rs. of N. Lighthouses..	5	2 9	134	*36·8*	30·35	188	139
Islay (Rhinns)	Com'rs. of N. Lighthouses..	7	3 6	74	..	30·58	153	140
Islay (Lochindaul)	Com'rs. of N. Lighthouses..	5	0 7	45	44·0	36·72	..	..
Islay (McArthur's Head)	Com'rs. of N. Lighthouses..	5	0 6	173	58·4	49·88	199	156
D Islay (Eallabus) *old g*	J. MacKillop, Esq.	5	1 0	68	48·9	39·76	201	155
d Islay (Dunlossit)	Mrs. N. M. Dunlop	5	1 0	100	55·0	47·14	..	133
Islay (Rhuvaal)	Com'rs. of N. Lighthouses..	5	1 0	69	42·0	33·46	196	170
D Jura (Ardfin)	Colin Campbell, Esq.	5	1 0	160	*53·8*	43·47	212	159
D Jura (Ardlussa)	W. Hargreaves Brown, Esq.	5	0 10	70	..	46·00	203	159
Lismore (Mousedale)	Com'rs. of N. Lighthouses..	7	3 10	38	43·7	38·02	181	163
D Mull (Bunessan)	Angus Cameron, Esq.	5	1 3	50	51·6	47·66	188	174
D Mull (Auchnacraig)	G. W. Duncan, Esq.	8	..	30	..	69·56	183	169
Mull (Benmore)	The Meteorological Office...	5	2 0	2800	135·8	114·83	..	..
D Mull (Glencannel)	W. H. Mackay, Esq.	5	1 3	140	116·9	92·00	237	196
D Mull (Ulva)	F. W. Clark, Esq.	5	1 0	30	64·8	57·13	236	183
D Mull (Gruline)	J. W. Melles, Esq.	8	1 0	100	79·0	70·71	245	202
Mull, Sound of	Com'rs. of N. Lighthouses....		..	..	61·5	56·07	220	179
Fladda Lighthouse	Com'rs. of N. Lighthouses..	5	1 6	25	*58·2*	46·25	..	150
D Tiree	(+A) J. R. Morrison, M.A., B.Sc. (M.O.)	8	1 0	22	44·7	42·08	228	169

DIVISION XVI—EAST MIDLAND COUNTIES.

CLACKMANNAN. (Area 55 sq. mi.)

1.—FORTH, LOWER—Left Bank Tributaries. 55 sq. mi.

D Alloa House Gardens	Earl of Mar & Kellie, K.T...	5	3 0	40	*34·3*	27·89	175	128
d Dollar (Dollarbeg)	James Bleloch, Esq.	5	0 9	300	*38·6*	30·75	(175)	(132)
D Tillicoultry (Westbourne)	Mrs. Willison	5	1 0	66	*37·0*	27·45	161	125
M Glendevon (Broich Burn)..No.2..	H. F. Hodge, Esq., C.E.	8	1 0	1333	*76·5*	54·46	..	..
M§Glendevon (Burnfoot Hill) .No. 8..	H. F. Hodge, Esq., C.E.	8	1 0	1721	*49·2*	40·44	..	..
M Glendevon (Backhill) .....No. 9..	H. F. Hodge, Esq., C.E.	8	1 0	1067	*58·7*	44·29	..	..
D Glendevon (Backhill)	H. F. Hodge, Esq., C.E.	8	1 0	1067	*60·5*	46·90	193	154

KINROSS. (Area, 87 sq. mi.)

1.—FORTH, LOWER—Left Bank Tributaries. 15 sq. mi.

2.—LEVEN & C. 67 sq. mi.

d Loch Leven Sluice	Mr. J. Thomson	8	0 9	360	35·8	25·86	..	..
D Milnathort (Laurel Bank)	Capt. L. Kininmonth	5	1 0	398	*36·0*	27·65	154	118
D Milnathort (Ledlanet)	Sir James C. Calder, C.B.E..	5	1 3	700	*44·4*	32·24	182	132
D Milnathort (Ochil Hills San.)	The Medical Superintendent	5	1 0	800	..	36·02	189	143

3.—EDEN. 2 sq. mi.

4.—TAY—Earn. 3 sq. mi.

FIFE. (Area, 505 sq. mi.)

1.—FORTH, LOWER—Left Bank Tributaries. 68 sq. mi.

d Rosyth (H. M. Dockyard)	The Supt. Civil Engineer...	8	1 0	53	25·7	20·20	..	..
D Dunfermline	The Carnegie Dunfermline Trust	5	1 0	237	..	23·56	163	109
d Kincardine (Tulliallan)	Col. Alexander Mitchell .	5	1 0	80	..	22·98	..	..
Carnock (Craigluscar Res.)	D. H. Shaw, Esq., M.C., C.E.	12	0 4	480	36·1	29·60	..	..

§ Gauge over-exposed.

DIVISION XVI—EAST MIDLAND COUNTIES—(*con.*).

STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Rain-gauge: Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
FIFE—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
2.—LEVEN & C. 208 sq. mi.								
d **Dunfermline (Fordell House)**	Countess of Buckinghamshire	5	1 9	250	32·0	25·12	..	..
d **Burntisland (Cullaloe Res.)**	J. A. Waddell, Esq.	5	1 0	294	..	22·22	..	..
D KIRKCALDY (Munro Street)	The Town Council (F. Braid)	5	1 0	66	30·0	23·10	172	106
d Kirkcaldy (Townsend Crescent)	Wm. Hutton, Esq.	5	1 0	113	..	(23·35)	(163)	(100)
D Cowdenbeath (Sewage Wks.)	C. A. Alexander, Esq.	5	1 0	390	..	27·38	164	118
M **Cleish Hills (Craiggaveral)**	C. A. Alexander, Esq.	5	1 0	760	41·0	28·03	..	..
M **Cleish Hills (Roscobie Res.)**	C. A. Alexander, Esq.	5	1 0	660	39·6	28·13	..	..
D Kirkcaldy (Carberry)	R. Ritchie, Esq.	5	1 0	326	..	21·74	174	116
M **Cleish Hills (Blairadam)**	C. A. Alexander, Esq.	5	1 0	670	35·8	23·66	..	..
M **Cleish Hills (Lochglow Res..)**	C. A. Alexander, Esq.	5	1 0	900	39·3	26·44	..	..
D **Leslie (Lothrie Reservoir)**	R. Ritchie, Esq.	5	1 0	700	36·7	26·75	173	113
D **Elie (The Castle)**	Miss E. E. Scott Moncrieff..	5	0 8	9	25·2	20·33	192	114
D **Colinsburgh (Cairnie House)**	Maj. R.A. Anstruther, D.S.O.	5	3 6	125	28·8	20·15	165	113
D **Colinsburgh (Balcarres)**	Mr. W. Adams	5	1 0	300	..	22·43	164	116
D Carnbee (Ovenstone W.W.)	C. Birrell, Esq.	5	0 5	168	..	(22·44)	172	115
Kirkmay (Crail)	J. Duncan, Esq.	5	1 0	110	..	21·53	..	..
3.—EDEN & C. 205 sq. mi.								
D **Cupar (Clatto Reservoir)**	Jas. M. Alexander, Esq.	5	1 0	505	30·1	23·83	193	112
d Cameron Waterworks	W. Watson, Esq., C.E.	5	1 0	478	29·9	23·00	..	115
D **Cupar (Pitlair)**	Mr. P. Webster	5	1 0	126	29·5	21·57	151	106
D **Cupar (Rankeillour)**	Mr. R. Tunstall	5	1 0	240	28·7	22·71	160	110
D CUPAR (The Asylum)	The Medical Superintendent	5	1 0	210	27·7	21·13	147	106
D **Kingsbarns**	Miss M. R. Nimmo	5	1 0	35	..	18·56	149	103
D **Cupar (Over Rankeillour)**	H. Giles Walker, Esq.	5	1 0	200	28·7	21·65	170	100
D **St. Andrews (Waterworks)**	W. Watson, Esq., C.E.	5	1 0	217	27·3	18·05	150	107
D ST. ANDREWS	W. Watson, Esq., C.E.	5	1 0	13	27·1	19·02	160	104
D LEUCHARS (Aerodrome)	The Meteorological Officer..	8 (+A)	1 0	30	25·7	20·03	172	104
4.—FIRTH OF TAY. 25 sq. mi.								
D **Newport (Tayfield)**	W. Berry, Esq.	5	0 7	100	28·3	23·68	175	132
D **Newport Manse**	Rev. John A. Lees	5	1 0	150	27·1	20·78	161	105
D **Newport (Seabank)**	J. Grant Bruce, Esq.	5	4 6	15	27·5	20·74	164	101
D TAYPORT (Lighthouse)	Dundee Harbour Trust (J. H. Thomson, M.Sc.)	5	1 0	27	26·3	22·51	184	112
5.—TAY—Earn. 1 sq. mi.								
6.—INSULAR.								
D INCHKEITH (Lighthouse)	Lightkeeper (M.O.)	8	1 0	190	21·8	18·94	150	103
Isle of May	Com'rs. of N. Lighthouses..	5	4 0	180	..	17·00	150	103
PERTH. (Area, 2535 sq. mi.)								
1.—FORTH—Right Bank Tributaries. 17 sq. mi.								
D Gartmore House Gardens	Mr. H. B. Matheson	5	1 0	160	*56·0*	42·03	203	140
d Loch Dhu	G. Henshilwood, Esq., C.E...	8	0 6	325	79·8	56·65	..	159
2.—FORTH, UPPER—Left Bank Tributaries. 84 sq. mi.								
w Ledard	G. Henshilwood, Esq., C.E..	8	0 6	1500	*61·2*	49·95	..	..

DIVISION XVI—EAST MIDLAND COUNTIES—(*con.*).

	STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Rain-gauge: Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
	PERTH—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
	8.—FORTH—Teith. 221 sq. mi.								
	Ochtertyre (Stirling)	Lt.-Co. J. C. Dundas, D.S.O.	5	0 10	14	..	25·65	..	..
w	Loch Drunkie	G. Henshilwood, Esq., C.E.	8	1 0	420	*62·1*	46·75	..	..
D	Invertrossachs	Sir James R. Wilson, Bt.	5	1 0	380	*58·7*	42·43	189	157
w	Ben Venue (Glasahoile)	G. Henshilwood, Esq., C.E.	8	1 0	1150	*80·4*	55·57	..	..
D	Loch Vennachar	G. Henshilwood, Esq., C.E.	8	1 0	275	55·3	41·96	182	146
D	Bridge of Turk	G. Henshilwood, Esq., C.E.	8	1 0	275	*63·5*	44·71	202	145
w	Loch Katrine (Tunnel Hill Top)	G. Henshilwood, Esq., C.E.	8	0 6	830	*81·4*	60·10	..	..
w	Ben Ledi	G. Henshilwood, Esq., C.E.	8	1 0	1400	*66·6*	51·95	..	..
w	Achnahard	G. Henshilwood, Esq., C.E.	8	1 0	474	*65·5*	48·70	..	..
	Callander (Leny House)	Capt. M. Murray Buchanan.	5	1 0	340	*56·3*	38·20	..	..
w	Strone Bridge	G. Henshilwood, Esq., C.E.	8	1 0	380	*72·4*	53·10	..	..
w	Glen Meann	G. Henshilwood, Esq., C.E.	8	1 0	800	*77·2*	54·15	..	..
w	Glen Finlas	G. Henshilwood, Esq., C.E.	8	1 0	1200	*79·0*	58·80	..	..
d	Glengyle	G. Henshilwood, Esq., C.E.	8	0 6	380	89·9	68·65	..	177
w	Upper Glengyle	G. Henshilwood, Esq., C.E.	8	1 0	750	*95·6*	73·15	..	..
w	Allt a' Choin	G. Henshilwood, Esq., C.E.	8	1 0	1250	*89·6*	66·65	..	..
w	Balquhidder (Blaircreach)	J. M. Fergusson, Esq.	5	1 0	460	*94·7*	72·34	..	..
	4.—FORTH, LOWER—Left Bank Tributaries. 107 sq. mi.								
d	Dunblane	W. L. Gibson, Esq., C.E.	5	1 0	250	*37·3*	26·34	..	..
D	Glendevon (Glenquey Res.) No. 2.	H. F. Hodge, Esq., C.E.	8	1 0	945	*54·7*	42·38	161	150
d	Glendevon (Tormaukin)	W. Phillips, Esq.	8	1 6	770	*53·6*	37·28	(175)	(137)
D	Glendevon (Frandy)	H. F. Hodge, Esq., C.E.	8	1 0	911	*60·4*	48·11	196	145
	Glendevon (Glensherup)	D. H. Shaw, Esq., M.C., C.E.	12	0 4	945	*59·8*	39·08	..	..
M	Glendevon (Bald Hill). No. 1.	H. F. Hodge, Esq., C.E.	8	1 0	1202	*56·5*	44·61	..	..
M	Glendevon (Wether Hill). No. 10.	H. F. Hodge, Esq., C.E.	8	1 0	1408	*48·8*	37·49	..	..
	5.—LEVEN. 1 sq. mi.								
	6.—EDEN. 4 sq. mi.								
	7.—TAY—Earn. 376 sq. mi.								
D	Gleneagles House	Mr. J. Scrimgeour	8	1 0	447	*45·3*	32·85	180	141
	Upper Farg (Plains)	Messrs. Leslie & Reid, C.E.	8	1 0	900	*35·9*	33·00	..	..
D	Upper Farg (Main Bank)	Messrs. Leslie & Reid, C.E.	5	1 0	642	*31·3*	28·20	178	114
D	Dunning (Kippen House)	Lady Wilson	5	1 0	450	*43·1*	32·88	167	121
D	Abernethy (Glenfarg House)	Norman I. Nasmyth, Esq.	5	1 3	120	..	27·50	172	132
d	Glenfarg (Fordel)	Maj.-Gen. A. H. Marindin, C.B., D.S.O.	5	1 0	700	..	28·36	..	115
D	Bridge of Earn (Ballendrick)	G. M. Taylor, Esq.	5	1 0	50	*32·6*	25·64	191	122
D	Forgandenny (Horselea)	D. W. Guthrie, Esq.	5	0 9	..	..	24·27	171	113
d	Bridge of Earn (Kinmonth)	Major D. G. Moncrieff Wright	5	1 0	..	*30·4*	21·00	..	..
D	Lochearnhead (Ardloch)	S. Moir, Esq.	5	1 0	370	*64·3*	46·17	214	151
D	Lochearnhead (Edinchip)	Sir Malcolm MacGregor, Bt.	5	1 0	513	*70·3*	51·13	211	157
D	Comrie (Dunira)	W. Gilchrist Macbeth, Esq.	10	1 6	240	*52·0*	37·23	162	134
D	Crieff (Strathearn Hydro)	G. Reid for Dr. G. Meikle.	5	1 0	478	40·9	28·59	188	125
	8.—TAY—Almond & c. 149 sq. mi.								
D	Perth (Wellshill Cemetery)	The Town Council (J. Ritchie)	5	1 0	76	30·8	20·98	172	98
w	Logiealmond Lodge	Earl of Mansfield.	8	1 3	1020	*48·5*	35·24	..	..
D	Glen Almond (Auchnafree)	Major J. A. C. Whitaker.	5	1 0	1015	*62·0*	51·53	174	139
	9.—TAY—Strathtay below Dunkeld. 33 sq. mi.								
	Murthly (Douglasfield)	W. A. Rae, Esq.	5	1 0	237	*34·9*	24·78	153	119
D	Dunkeld (Snaigow)	W. H. Cox, Esq.	5	1 0	370	*35·0*	26·19	196	135
D	Dunkeld (Kincairney Lodge)	Mrs. Richmond	8	1 0	400	..	24·87	213	132

DIVISION XVI—EAST MIDLAND COUNTIES—(*con.*).

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PERTH—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
10.—TAY—Bran. 81 sq. mi.								
D Strath Bran (Glenquaich Lodge)	W. H. Cox, Esq.	5	1 0	900	*55·0*	(40·22)	169	140
11.—TAY—Strathtay above Dunkeld. 95 sq. mi.								
D Aberfeldy (Dall Avon)	Dr. N. D. Mackay	5	1 0	320	*38·7*	30·79	185	127
Grandtully	W. L. Macnaughton, Esq.	5	1 0	233	*36·1*	22·63	175	..
12.—TAY—Loch Tay. 241 sq. mi.								
Tyndrum Manse	Rev. Farquhar MacRae	5	1 0	760	..	72·91	223	181
d Killin (Auchmore Gardens)	Mr. J. Easson	5	1 0	380	*56·8*	43·54	..	..
13.—TAY—Lyon. 142 sq. mi.								
D Glenlyon (Meggernie Castle)	Sir E. S. Wills, Bt	5	1 0	700	*61·0*	49·14	160	145
w Fortingall (Glenlyon House)	Mr. J. W. Ford	5	1 0	425	*45·5*	(30·92)	..	..
14.—TAY—Tummel. 587 sq. mi.								
D Loch Rannoch (Dall)	Mr. D. Robertson, Jun.	5	1 0	722	43·2	36·79	193	146
D Loch Rannoch (Station)	Messrs. Balfour Beatty & Co.	5	1 0	1007	62·5	48·15	164	145
D Pitlochry (Dunfallandy)	D. Stewart-Fergusson, Esq.	5	1 6	410	32·9	27·80	189	163
D Loch Rannoch (Power House)	Messrs. Balfour Beatty & Co.	5	1 0	675	43·6	32·87	193	145
D Pitlochry (Bonskeid)	Dr. G. F. Barbour	5	1 0	540	33·0	20·26	170	125
D Fincastle House	Dr. G. F. Barbour	5	1 0	980	33·9	24·60	172	114
D Ericht Dam	Messrs. Balfour Beatty & Co.	5	1 0	1106	52·0	39·36	219	161
d Struan (Auchleeks)	Miss Robertson	5	1 0	710	43·9	35·73	..	149
D Blair Atholl (Blair Castle Grdns)	Mr. J. Dickson	5	1 0	500	33·1	27·88	222	132
D Glen Bruar (Bruar Lodge)..No. 1	The late Mr. A. McLauchlan	5	1 0	1600	44·9	36·81	199	152
d Glen Bruar (Bruar Lodge)..No. 2	The late Mr. A. McLauchlan	5	1 0	1600	45·9	(38·86)	(199)	(155)
15.—TAY—Isla. 282 sq. mi.								
Blairgowrie (Kinloch Manse)	Rev. T. Milne	5	1 0	280	*29·6*	22·85	..	..
D Dunkeld (Cardney)	A. R. Macgregor, Esq.	5	1 0	350	*36·7*	27·80	181	144
D Kirkmichael (Ballintuim Ho.)	Miss M. A. Macdonald	5	1 4	700	*37·8*	31·41	208	133
d Kirkmichael (School)	W. Muckersie, Esq.	5	1 0	700	..	(27·94)	..	..
16.—TAY—Left Bank Tributaries. 51 sq. mi.								
Pitfour Castle	Miss D. Cairns	..	..	..	*29·0*	23·92	142	117
D Kinfauns (Balthayock)	R. Wylie Hill, Esq.	5	4 6	323	*32·0*	23·39	176	111
D Perth (Ard Choille)	Earl of Mansfield	5	0 11	90	*31·8*	23·52	176	110
17.—FIRTH OF TAY. 45 sq. mi.								
Errol (Annat Cottage)	W. Kimm, Esq.	5	5 0	200	*27·5*	22·20	..	..
18.—SPEY—Right Bank Tributaries. 1 sq. mi.								
19.—LOCH LINNHE.—Left Bank Tributaries. 2 sq. mi.								
20.—CLYDE—Leven. 36 sq. mi.								

DIVISION XVI—EAST MIDLAND COUNTIES—(*con.*).

STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Rain-gauge: Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
ANGUS (Area, 875 sq. mi.)		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
1.—TAY—Isla. 211 sq. mi.								
D KETTINS School	W. B. Ogilvie, Esq., M.A., B.Sc.	5	1 0	218	32·0	24·33	174	104
D Glamis Castle	Mr. D. McInnes	5	0 9	250	30·9	27·28	165	112
Forfar (Yeaman Street)	W. Welsh, Esq.	5	1 0	226	..	29·57	156	127
D Kirriemuir (Lintrathen)....(+A)	G. Baxter, Esq., C.E.	8	1 0	700	34·7	28·19	191	126
M Kirriemuir (Balnakeilly)	G. Baxter, Esq., C.E.	5	1 0	700	34·1	32·45	..	..
M Kirriemuir (Dykends)	G. Baxter, Esq., C.E.	5	1 0	750	..	31·10	..	..
M Kirriemuir (Creich Hill, N.)	G. Baxter, Esq., C.E.	5	1 0	1491	40·5	32·58	..	..
M Kirriemuir (Backwater)	G. Baxter, Esq., C.E.	5	1 0	850	..	33·61	..	..
M Kirriemuir (Westerton)	G. Baxter, Esq., C.E.	5	1 0	900	..	33·43	..	..
M Kirriemuir (Macritch)	G. Baxter, Esq., C.E.	5	1 0	1300	..	32·81	..	..
M Kirriemuir (Newton)	G. Baxter, Esq., C.E.	5	1 0	735	..	33·06	..	..
M Kirriemuir (Longdrum)	G. Baxter, Esq., C.E.	5	1 0	1045	39·3	33·80	..	..
M Kirriemuir (Glendye)	G. Baxter, Esq., C.E.	6	1 0	1050	..	38·83	..	..
M Kirriemuir (Barney)	G. Baxter, Esq., C.E.	5	1 0	1130	40·2	34·05	..	..
M Kirriemuir (Glenhead)	G. Baxter, Esq., C.E.	5	1 0	1340	..	39·90	..	..
M Kirriemuir (Dalvanie)	G. Baxter, Esq., C.E.	5	1 0	1020	..	37·40	..	..
M Kirriemuir (Glen Damff)	G. Baxter, Esq., C.E.	5	1 0	1360	..	(37·25)	..	..
2.—FIRTH OF TAY. 80 sq. mi.								
D CARNOUSTIE (BUDDON NESS LT.)	Dundee Harbour Trust (J. H. Thomson, M.Sc.)	5	1 0	27	26·4	18·87	184	104
D DUNDEE HARBOUR	Dundee Harbour Trust (J. H. Thomson, M.Sc.)	5	0 11	14	27·4	21·15	169	109
D Dundee (Stobsmuir Res.)	G. Baxter, Esq., C.E.	5	1 0	278	..	23·39	157	116
d Dundee (Camperdown Works)	Messrs. Cox Bros., Ltd.	5	1 0	300	26·8	(24·72)	..	..
D Balruddery	H. S. Sharp, Esq.	5	1 0	266	29·8	23·37	182	119
D DUNDEE (Mayfield)	The Director of Studies	8	1 0	147	26·2	23·35	176	124
3.—SOUTH ESK & C. 371 sq. mi.								
D CARNOUSTIE	Burgh Surveyor	8	1 0	39	27·2	19·24	175	107
D Monikie Reservoir	G. Baxter, Esq., C.E.	5	1 0	494	34·7	25·57	176	121
D Monikie (Crombie Reservoir)	G. Baxter, Esq., C.E.	5	1 0	528	35·2	28·08	214	133
M Monikie (Fallaws)	G. Baxter, Esq., C.E.	8	3 0	585	33·2	27·56	..	..
D Arbroath (Hill Terrace)	J. C. Dewar, Esq.	5	1 0	50	..	18·97	160	97
D ARBROATH (W. Cemetery)	The Town Council (J. W. Robertson)	5	1 0	93	25·6	18·02	149	96
w Arbroath (Muirheads Res.)	T. A. Hogg, Esq., C.E.	5	1 0	251	28·1	22·93	..	..
Forfar (Pitscandly House)	J. T. Ewen, Esq.	5	1 8	300	..	(26·70)	..	..
D Brechin (Argyll Street)	J. Hutton, Esq.	5	1 0	225	34·1	26·32	167	117
D Forfar W. W. (Den of Ogil)	Alex. C. Miller, Esq., C.E. 12x4		2 1	633	..	(35·27)	153	130
D Glenogil Waterworks	T. A. Hogg, Esq., C.E.	5	1 0	770	40·9	36·00	138	124
D Glen Prosen (Pearsie House)	G. M. Wedderburn, Esq.	5	1 0	600	39·1	31·94	182	132
M Glen Prosen (Cormuir)	G. Baxter, Esq., C.E.	5	1 0	870	..	39·30	..	..
D Glen Prosen (Balnaboth Gdns.)	J. F. Hardie, Esq.	5	1 0	575	..	33·35	160	131
4.—NORTH ESK & C. 213 sq. mi.								
Brechin (Trinity)	Miss E. A. Stevenson	8	1 0	295	32·3	26·83	..	..
D MONTROSE (SUNNYSIDE ASYLUM)	The Medical Superintendent	5	1 0	200	27·0	22·36	161	104
D Montrose (Kinnaber W.W.)	D. Maxwell, Esq., C.E.	4	1 0	40	26·9	22·31	173	117
Brechin (Stracathro Gardens)	Mr. A. Dunlop	5	1 0	200	30·5	24·62	..	..

DIVISION XVII—NORTH-EASTERN COUNTIES.

KINCARDINE. (Area, 382 sq. mi.)								
1.—NORTH ESK & C. 99 sq. mi.								
D Marykirk (Balmakewan)	W. Low, Esq., B.Sc.	5	1 1	120	30·3	24·89	154	110
D Marykirk (BALMAKEWAN), No. 2	W. Low, Esq., B.Sc.	5	1 0	80	30·2	24·45	157	111
D Laurencekirk (Johnston Lodge)	R. B. Pearson, Esq.	5	1 0	400	33·1	29·50	168	117
D Fettercairn (Fasque)	Sir J. E. Gladstone, Bt.	5	0 10	320	36·0	30·82	198	137
D Fordoun (Auchenblae)	D. N. Collie, Esq.	5	1 0	325	..	29·73	184	125
2.—BERVIE, COWIE & C. 139 sq. mi.								
Todhead Pt. Lighthouse	Com'rs. of N. Lighthouses	5	1 9	114	..	18·89	..	..
D Stonehaven (Mains of Cowie)	John Hart, Esq.	5	1 0	100	..	24·81	149	114
Girdleness	Com'rs. of N. Lighthouses	7	4 0	89	..	(25·57)	..	..

DIVISION XVII—NORTH-EASTERN COUNTIES—(*con.*).

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KINCARDINE—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
3.—DEE. 144 sq. mi.								
D Strachan (Bridge of Dye)	Sir J. E. Gladstone, Bt.	5	1 0	513	43·9	38·76	192	126
D Banchory (Invery)	Major Jas. Kerr	5	1 0	225	34·8	34·55	171	124
D Banchory (Woodlands Sch.)	D. B. McKelvie, Esq.	5	1 0	300	..	35·91	167	127
ABERDEEN. (Area, 1,974 sq. mi.)								
1.—DEE. 672 sq. mi.								
Glen Muick	T. F. Henderson, Esq., C.E.	5	1 0	1370	45·1	39·80	..	..
D Glen Muick (Inchnabobart)	T. F. Henderson, Esq., C.E.	5	1 0	1270	..	42·34	189	144
Glen Tanner (Aitnach)	T. F. Henderson, Esq., C.E.	5	1 0	1260	41·9	40·61	..	..
D Braemar (Bank)	J. Campbell, Esq.	5	1 0	1111	35·4	31·62	177	132
D Braemar (Derry Lodge)	T. F. Henderson, Esq., C.E.	5	1 0	1400	38·1	30·93	194	154
D Balmoral Castle Gardens	R. F. Chalmers, Esq.	5	1 0	927	33·0	30·56	218	128
D Abergeldie Castle Gardens	Mr. J. Durran	5	1 0	800	32·4	32·82	182	132
D Ballater (Irrigation Farm)	T. F. Henderson, Esq., C.E.	5	1 0	637	33·2	30·85	156	119
D Aboyne	T. F. Henderson, Esq., C.E.	5	1 0	412	31·0	30·63	153	120
D Dess House	W. R. Davidson, Esq.	5	1 8	480	31·2	31·91	(167)	(135)
D Glen Gairn (Gairn Shiel Lodge)	T. F. Henderson, Esq., C.E.	5	1 0	1100	34·4	31·06	167	127
d Glen Gairn (Corndavon)	T. F. Henderson, Esq., C.E.	5	1 0	1500	37·3	30·84	..	..
D Torphins (School House)	Dr. George Davidson	5	1 4	480	..	30·89	166	127
M Lumphanan	T. F. Henderson, Esq., C.E.	5	1 0	490	31·6	29·26	..	..
D Drumoak (Drum Castle)	Mrs. Irvine	5	1 0	320	30·9	31·76	168	131
D Logie Coldstone School	Duncan Paterson, Esq., M.A., B.Sc.	5	1 0	608	30·9	26·26	195	125
D Aberdeen (Mannofield Res.)	T. F. Henderson, Esq., C.E.	5	1 0	171	30·5	30·64	206	140
D Craigiebuckler	Macaulay Institute for Soil Research	5	1 0	220	..	32·62	181	140
2.—DON. 512 sq. mi.								
D Aberdeen (Observatory). (+A)	Assistant-in-Charge	8	1 0	37	29·5	26·49	187	128
D Aberdeen (Woodside)	Forestry Commission	5	1 0	100	..	29·74	208	145
d Strathdon (Estates Office)	C. Christie, Esq.	5	1 2	990	35·0	27·21	..	..
D Craibstone (Sth. Meethill Field)	Prof. J. Hendrick	5	1 0	275	33·6	30·85	184	133
D Dyce (Craibstone)	Abr. & N. of S. Coll. of Ag.	8	1 0	300	31·5	30·20	183	130
D Dyce (Parkhill House)	Mrs. Crombie	8	0 11	170	31·4	31·26	181	138
D Inverurie (Westfield)	J. Skinner Troup, Esq.	5	1 0	207	28·3	29·80	170	137
3.—YTHAN & C. 285 sq. mi.								
D Ellon (Esslemont House)	Capt. R. Wolrige Gordon, M.C.	5	1 6	100	29·8	29·66	210	140
D Ellon (Auchmacoy)	Earl of Caithness	5	1 0	150	..	26·00	188	133
D Haddo House	Earl of Haddo	5	1 0	186	31·5	29·82	211	137
D Fyvie Castle	Col. Sir C. R. Forbes-Leith, Bt.	5	1 0	200	33·9	33·33	168	147
4.—UGIE & C. 257 sq. mi.								
New Deer School House	J. A. Thomson, Esq.	5	1 0	397	32·3	31·02	..	..
D Peterhead (Stockbridge)	J. Robertson, Esq.	5	1 0	150	28·5	25·92	207	136
D Peterhead (Mains of Buthlaw)	W. Johnston, Esq.	5	1 6	120	30·3	25·12	181	136
D Peterhead (Forehill Works)	J. Dickie, Esq., C.E.	5	0 8	133	30·3	26·87	183	144
D Brucklay Castle	A. Dingwall Fordyce, Esq.	5	1 3	300	..	28·97	176	134
D Brucklay Castle Gardens	A. Dingwall Fordyce, Esq.	5	1 1	300	..	30·37	204	151
Kinnaird Head	Com'rs. of N. Lighthouses	5	1 0	62	23·5	22·20	155	125
5.—DEVERON & C. 248 sq. mi.								
Huntly (Union Bank Ho.)	F. G. Allordice, Esq.	5	1 0	500	..	29·87	..	..
D Huntly (Cruchie)	Miss C. Joss	5	1 0	400	31·7	31·66	217	138

DIVISION XVII—NORTH-EASTERN COUNTIES—(*con.*).

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BANFF. (Area, 630 sq. mi.)		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
1.—YTHAN. 1 sq. mi.								
2.—DEVERON & C. 344 sq. mi.								
D **Drummuir Castle**	G. Clinton Chessor, Esq.	5	1 10	620	36·4	31·37	199	145
d **Keith Station**	A. Munro, Esq.	5	1 0	356	33·8	27·89	..	..
D **Turriff (Forglen Gardens)**	Mr. G. Stuart	5	1 0	220	31·9	30·76	198	138
D **Gamrie (Clenterty P. School)**	T. H. Smith, Esq.	5	1 0	420	40·1	32·30	192	139
D BANFF	The Town Council (I. H. Gordon)	5	0 9	130	26·8	23·29	183	130
Buckie (Rochonnie)	W. Hendry, Esq.	5	1 0	334	27·0	18·75	..	..
Buckie (West Church Street)	W. Hendry, Esq.	5	1 0	75	26·2	19·19	..	..
D Cullen House Gardens	Mr. Mitchell Harrower	5	1 2	150	30·6	25·99	162	135
3.—SPEY—Right Bank Tributaries. 285 sq. mi.								
D **Ballindalloch**	C. Mackenzie, Esq.	8	1 0	680	33·0	29·38	197	130
D **Aberlour Orphanage**	J. G. White, Esq.	5	1 0	350	32·7	29·97	169	130
MORAY. (Area, 477 sq. mi.)								
1.—DEVERON & C. 7 sq. mi.								
2.—SPEY—Right Bank Tributaries. 35 sq. mi.								
D Fochabers (GORDON CASTLE)	C. Webster for the Duke of Richmond & Gordon, K.G.	5	1 0	104	29·8	24·39	171	128
3.—SPEY—Left Bank Tributaries. 133 sq. mi.								
d Grantown-on-Spey	W. Currie, Esq.	5	1 1	700	31·1	24·56	(169)	(120)
D **Knockando (Windmill Cottage)**	Mr. L. Younie	5	1 0	606	33·3	28·87	185	133
D **Aberlour (Wester Elchies)**	Mr. A. Ross	5	1 0	550	34·2	28·39	173	135
4.—LOSSIE & C. 154 sq. mi.								
D Kellas (Kellas House)	G. Christie, Esq.	5	0 9	446	..	26·62	173	132
D **Lhanbryde (Blackhills House)**	T. N. Christie, Esq.	5	3 6	310	29·2	27·03	185	146
D **Elgin (Kirkhill)**	P. J. Macdonald, Esq.	5	1 7	35	..	23·56	153	125
M **Elgin (Rotha)**	W. C. Young, Esq.	5	1 0	80	25·8	21·78	..	..
D **Duffus (Hopeman Lodge)**	Mrs. Gordon Duff.	8	0 6	65	..	19·89	160	125
D Lossiemouth (Moray Golf Club)	The Secretary	5	1 0	53	..	20·40	162	116
Covesea (Skerries)	Com'rs. of N. Lighthouses.	5	8 0	32	..	17·82	..	..
5.—FINDHORN & C. 148 sq. mi.								
D **Forres (Drumduan)**	The MacKinnon of MacKinnon	5	0 9	120	..	22·69	173	126
D Forres (Drumduan Gdns.)	G. Dyker, Esq.	8	5 0	50	..	22·64	179	125
D FORRES (Hydro)	The Town Clerk	5	1 0	155	..	21·71	167	116
NAIRN. (Area, 163 sq. mi.)								
1.—FINDHORN & C. 102 sq. mi.								
D Drynachan Lodge	Alex. Manson, Esq.	5	1 0	729	..	30·57	184	149
D **Ardclach (Glenferness)**	Mr. A. McKenzie	8	1 6	700	34·8	28·68	149	131
D **Lethen**	Col. Hon. I. M. Campbell, D.S.O.	5	1 6	350	..	23·24	186	120
2.—NAIRN & C. 61 sq. mi.								
D **Cawdor Castle**	Mr. James Taylor	5	0 6	225	29·2	25·37	206	143
D **Nairn (Balblair)**	Major H. C. H. Allanby	5	1 0	94	24·5	19·44	181	119
Nairn (Urchany Res.)	The Town Council	5	1 0	291	..	22·77	..	..
D **Nairn (Achareidh)**	Major K. S. Clarke	8	1 0	59	24·3	19·68	206	118
D NAIRN (Golf Course)	The Joint Town Clerk	8	1 0	20	24·9	17·99	178	112

DIVISION XVIII—NORTH-WESTERN COUNTIES.

	STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
	INVERNESS. (Area, 4,146 sq. mi.)		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
	1.—TAY—Tummel. 28 sq. mi.								
d	Loch Ericht (Ben Alder Lodge)	Mr. F. Mackintosh	5	1 0	1175	52·5	38·03	(217)	(151)
	2.—SPEY—Right Bank Tributaries. 437 sq. mi.								
	Dalwhinnie (Drumochter Lodge)	Mr. J. Thow	5	1 0	1375	57·7	(38·63)	..	..
D	DALWHINNIE	The Rev. R. G. Cochrane (M.O.)	8	1 0	1176	46·7	34·78	186	150
	3.—SPEY—Left Bank Tributaries. 257 sq. mi.								
D	Cluny Castle	Mr. A. Macdonald	5	1 0	816	39·9	28·20	201	145
D	Glenshero	British Aluminium Co., Ltd.	8	1 0	880	..	34·36	217	162
M	Loch Spey	British Aluminium Co., Ltd.	5	1 0	1164	67·5	52·15	..	..
D	Laggan (Gergask)	British Aluminium Co., Ltd.	8	1 0	870	*38·4*	28·70	196	143
D	Kingussie (The Birches)	British Aluminium Co., Ltd.	8	1 0	810	31·5	24·67	203	130
d	Alvie Manse	Rev. Dugald Maclean	5	1 0	750	30·3	22·19	(165)	(124)
D	Carr Bridge (Crannich)	Mrs. J. A. Doak	5	1 0	900	29·6	24·76	182	124
	4.—FINDHORN. 164 sq. mi.								
D	Tomatin (Dalmigavie Lodge)	Mr. A. Kennedy	5	1 0	1150	..	30·92	179	139
	5.—NAIRN & C. 131 sq. mi.								
	6.—NESS—Right Bank Tributaries. 252 sq. mi.								
d	Loch Ness (Killin, Whitebridge)	British Aluminium Co., Ltd.	8	1 0	1200	*47·9*	41·60	..	132
D	Loch Ness (Garthbeg)	British Aluminium Co., Ltd.	8	1 0	630	*41·5*	34·58	204	145
D	Loch Ness (Foyers)	British Aluminium Co., Ltd.	8	1 0	52	38·2	27·37	184	131
D	Loch Ness (Aberchalder)	British Aluminium Co., Ltd.	8	1 0	700	*35·8*	30·82	199	136
D	INVERNESS (Culduthel Res.)	The Town Council (A. Knowles)	5	1 0	242	*26·7*	21·35	168	113
	7.—NESS—Garry &c. 185 sq. mi.								
M	Loch Quoich (Loan)	Col. D. W. Cameron of Lochiel	5	1 0	750	..	(94·88)	..	..
D	Loch Quoich (Glenquoich)	D. Macaulay, Esq	5	1 2	569	110·7	77·07	201	180
D	Invergarry (The Schoolhouse)	W. M. Aitken, Esq.	5	1 0	180	..	46·07	224	170
	8.—NESS—Moriston. 120 sq. mi.								
D	Glenmoriston (Ceannacroc)	J. Grant, Esq.	5	1 0	410	..	53·12	196	162
D	Glenmoriston (Invermoriston Hotel)	P. J. Kydd, Esq.*	5	1 0	70	..	34·71	152	134
	9.—NESS—Enrick. 131 sq. mi.								
D	Glen Urquhart (Corrimony)	P. H. Dolphin, Esq.*	5	1 0	520	..	33·56	186	156
D	Inverness (Ruigh Ard Asylum)	The Medical Supt.	5	0 11	330	*29·9*	26·85	194	140
	10.—BEAULY. 341 sq. mi.								
d	Beauly (Culmill)	W. L. McWilliam, Esq.	5	1 0	190	..	26·06	..	..
	11.—CROMARTY FIRTH. 13 sq. mi.								
	12.—SOUND OF SLEAT. 259 sq. mi.								
D	Loch Nevis (Inverie Gardens)	Mr. Malcolm McLeod	5	1 0	15	*85·6*	64·79	191	179
	13.—SOUND OF ARISAIG. 126 sq. mi.								
D	Moidart (Kinlochmoidart)	J. C. Stewart, Esq.	5	1 0	13	*69·4*	64·95	222	190
D	Arisaig (Faire-na-Sguir)	Miss C. C. Astley	5	1 0	30	*55·7*	42·70	213	162
D	Arisaig House	Mr. W. Grant	5	1 0	40	*62·9*	53·16	213	183
	14.—LOCH LINNHE—Right Bank Tributaries. 48 sq. mi.								
D	Loch Eil (Achdalieu)	Col. D. W. Cameron of Lochiel	5	1 0	100	61·8	59·72	209	167
	15.—LOCHY—Right Bank Tributaries. 143 sq. mi.								
D	Loch Arkaig (Achnacarry)	Col. D. W. Cameron of Lochiel	5	1 0	128	82·0	65·57	210	170
d	Loch Arkaig (Glendessary)	Col. D. W. Cameron of Lochiel	5	1 0	300	106·6	88·59	..	189

* Per Capt. W. N. McClean.

DIVISION XVIII—NORTH-WESTERN COUNTIES—(*con.*).

STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Rain-gauge: Aver-age Rain-fall.	1933. Rain-fall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
INVERNESS—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
16.—LOCHY—Left Bank Tributaries. 362 sq. mi.								
D Clunes (L. Lochy W.)	Col. D. W. Cameron of Lochiel	5	1 6	110	..	65·71	231	173
Loch Treig (Creaguaineach)	British Aluminium Co.,Ltd..	5	1 0	800	74·0	59·73	..	..
M Ben Alder (Loch a'Bhealich)	Mr. F. Mackintosh	5	1 0	2360	100·9	69·10	..	..
Loch Ossian (Strathossian Ho.)	British Aluminium Co.,Ltd..	8	1 0	1180	70·2	54·80	..	..
Fort William (Allt'a Mhuilinn)	British Aluminium Co.,Ltd..	8	1 0	1000	85·1	58·83	..	..
D Fort William (The Factory)	British Aluminium Co.,Ltd..	8	1 0	75	69·6	58·66	231	178
Roybridge (Lairig Road)	British Aluminium Co.,Ltd..	8	1 0	1650	91·2	65·29	..	..
M Ben Alder (Lochan Sgoir)	Mr. F. Mackintosh	5	1 0	2300	100·6	67·30	..	..
Spean Bridge (The Cour)	British Aluminium Co.,Ltd..	5	1 0	1050	92·5	75·47	..	..
D Loch Treig (Fersit)	British Aluminium Co.,Ltd..	8	1 0	850	62·9	48·95	223	169
Tulloch (Allt Laire)	British Aluminium Co.,Ltd..	5	1 0	1050	..	45·49	..	..
Roybridge (Allt Leachdach)	British Aluminium Co.,Ltd..	8	1 0	650	..	48·37	..	..
M Loch Pattack	Sir J. F. Ramsden, Bt.	5	0 9	1420	59·6	51·41	..	..
Glen Spean (Craigbeg)	British Aluminium Co.,Ltd..	8	1 0	860	54·9	46·49	..	..
W Loch Lochy (Invergloy)	Mr. J. Strang	5	1 0	200	58·9	55·94	..	..
D Loch Laggan (Ardverikie)	Sir J. F. Ramsden, Bt.	5	0 6	838	..	40·06	243	160
17.—LOCH LINNHE—Left Bank Tributaries. 120 sq. mi.								
D North Ballachulish (Alltshellach)	B. Chinnery-Haldane, Esq..	5	1 0	80	74·3	62·31	227	192
D Onich	Forestry Commission	5	1 3	48	72·8	(63·26)	(221)	(185)
D Glenleven (Blackwater Dam, N) 7.	British Aluminium Co.,Ltd..	8	1 0	1072	85·5	74·63	235	194
Kinlochleven (Mamore Lodge)	Mr. Ian Currie	5	1 8	700	95·1	84·38	..	..
Glenleven (Invercam) No. 6.	British Aluminium Co.,Ltd..	8	1 6	1070	74·8	58·50	..	..
Glenleven (Ciarin) No. 3.	British Aluminium Co.,Ltd..	8	1 6	1200	80·8	62·51	..	..
Glenleven (Loch Eilde Mhor) 8.	British Aluminium Co.,Ltd..	8	1 6	1130	94·9	74·08	..	..
Glenleven (Loch Eilde Beg) No. 9.	British Aluminium Co.,Ltd..	8	1 6	1125	94·6	66·59	..	..
Glenleven (Corrour) No. 5.	British Aluminium Co.,Ltd..	8	1 6	1260	70·1	49·97	..	..
D Fort William (Teviot)	J. W. Ainslie, Esq.	8	1 0	34	..	62·49	223	176
D Fort William (Glasdrum)	British Aluminium Co.,Ltd..	5	1 0	216	..	60·07	210	180
18.—INSULAR, INNER HEBRIDES. 786 sq. mi.								
D Isle of Eigg	Rt. Hon. Walter Runciman, P.C.	8	2 8	150	*53·5*	57·56	196	181
Hyskier	Com'rs of N. Lighthouses ..	5	0 5	31	*40·0*	39·47	173	166
D Skye (Kyleakin, Dunringell)	Maj. A. D. Mackinnon, C.M.G.	5	2 1	80	*62·4*	54·39	229	180
Oronsay Lighthouse	Com'rs. of N. Lighthouses..	5	0 6	10	*52·7*	45·41	232	169
D Skye (Scalpay Island)	Mr. D. Gunn	5	1 0	4	*75·1*	64·28	222	181
D Skye (Portree)	D. Dewar, Esq.	5	1 0	65	*61·7*	59·24	243	199
Skye (N. Eist Point)	Com'rs. of N. Lighthouses..	5	0 8	65	*50·0*	44·62	..	..
D Skye (Dunvegan)	Mrs. Mackenzie	5	3 0	47	*65·8*	47·22	204	171
D Skye, (Duntulm, Kilmuir)	Seton Gordon, Esq	5	1 0	294	..	39·33	217	167
19—INSULAR, OUTER HEBRIDES. 243 sq. mi.								
D Barra (Skallary)	J. Smith, Esq.	8	0 10	30	..	40·43	234	183
S. Uist (Ushenish Light)	Com'rs. of N. Lighthouses .	5	1 0	178	..	36·22	..	171
D Lochmaddy (Vallay)	G. Beveridge, Esq.	5	1 0	30	..	39·87	275	166
D N. Harris (Amhuinsuidh Castle)	Norman Robertson, Esq...	5	1 3	12	*57·5*	48·25	232	213
ROSS & CROMARTY. (Area, 3,237 sq. mi.)								
1.—NESS—Moriston. 35 sq. mi.								
D Glenmoriston (Cluanie Inn)	Mrs. Macdonald*	5	1 3	630	..	81·96	240	197
2.—BEAULY. 109 sq. mi.								
W Monar	Major J. S. Stirling	5	0 9	700	..	(62·37)	..	..
3.—MORAY FIRTH COAST STREAMS. 64 sq. mi								
D Fortrose	A. Thom, Esq, M.A.	5	1 0	69	*23·4*	15·64	150	98
d Fearn (Geanies)	Mr. A. Munro	5	0 11	200	*23·1*	16·65	..	..

* Per Capt. W. N. McClean.

DIVISION XVIII—NORTH-WESTERN COUNTIES—(*con.*).

STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Rain-gauge: Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
ROSS & CROMARTY—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
4.—CROMARTY FIRTH. 714 sq. mi.								
D Muir of Ord (Fairburn)	Major J. S. Stirling	5	1 0	500	..	27·07	153	128
d STRATHPEFFER SPA	W. Graham, Esq.	8	1 0	125	30·5	22·97	..	..
D Dingwall (The Academy)	The Rector	5	1 0	18	*29·0*	19·69	165	117
Cromarty	Com'rs. of N. Lighthouses	5	1 0	21	*24·4*	18·88	..	..
D Alness (Ardross Castle)	Mr. D. M. Sharpe	5	1 0	450	38·5	28·40	190	139
5.—DORNOCH FIRTH. 355 sq. mi.								
D Tain (Ardlarach)	Col. C. MacIver Ritchie	5	1 0	400	*29·4*	24·74	202	143
Tarbetness	Com'rs. of N. Lighthouses	5	1 10	62	*23·0*	16·01	..	..
6.—ENARD BAY. 78 sq. mi.								
7.—LOCH BROOM & C. 367 sq. mi.								
Loch a' Bhraoin (Voraio)	Mr. Murdo Mackenzie	8	0 9	820	*62·2*	68·10	..	..
Inverbroom House	The late Rev. Sir Montague-Fowler, Bt.	8	0 7	50	*54·7*	47·30	..	..
D Ullapool	Dr. D. Wallace	5	1 6	75	48·0	39·40	210	156
8.—LOCH EWE, LOCH TORRIDON & C. 423 sq. mi.								
w Kinlochewe (Greenhill)	R. Matheson, Esq.	5	0 9	85	..	57·96	..	..
Loch Maree (Letterewe)	M. MacLennan, Esq.	5	1 0	32	..	55·37	..	..
D Poolewe (Inverewe Gardens)	R. J. Hanbury, Esq.	5	0 6	20	*55·2*	45·88	190	173
9.—LOCH CARRON, LOCH ALSH & C. 401 sq. mi.								
D Glenshiel (Ratagan)	Forestry Commission	5	1 0	12	*80·0*	69·59	185	183
D Loch Duich (Inverinate)	J. Finlayson, Esq.	5	1 0	28	..	64·18	201	177
D Loch Carron (Dunhulladale)	Mrs. G. J. Campbell	5	1 0	9	*70·5*	65·18	240	170
Applecross Gardens	Mr. J. McCowan	5	1 6	70	57·3	53·88	..	..
D ACHNASHELLACH	Forestry Commission	5	1 0	225	84·4	64·45	225	195
10.—INSULAR, OUTER HEBRIDES. 691 sq. mi.								
D Stornoway (Leurbost Sch.)	A. Matheson, Esq.	5	0 6	100	..	(35·31)	(203)	(165)
Stornoway Lighthouse	Com'rs. of N. Lighthouses	5	0 6	28	..	34·20	173	148
D STORNOWAY (C. GUARD STN.)	Station Officer (M.O.)	8	1 0	79	49·9	34·74	225	161
Stornoway (Matheson Rd.)	Station Officer (M.O.)	8	1 0	30	..	38·90	228	180
Butt of Lewis Lighthouse	Com'rs. of N. Lighthouses	8	3 9	51	*39·6*	37·67	187	159

DIVISION XIX—NORTHERN COUNTIES.

SUTHERLAND. (Area, 2,080 sq. mi.).

1.—DORNOCH FIRTH. 413 sq. mi.								
D Skibo Castle Gardens	R. D. Cameron, Esq.	5	1 0	62	..	21·64	172	119
D Lairg	A. Gunn, Esq.	5	1 0	330	37·3	26·12	162	119
2.—FLEET, BRORA & C. 309 sq. mi.								
3.—HELMSDALE & C. 226 sq. mi.								

DIVISION XIX—NORTHERN COUNTIES—(*con.*).

STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
SUTHERLAND—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
4.—NORTH COAST STREAMS. 736 sq. mi.								
D Skerray (Borgie)	Forestry Commission	5	1 0	110	37·5	34·85	220	175
D Tongue	Miss. W. J. Lundie	5	1 0	180	41·0	33·27	230	174
D Melvich	A. MacIntosh, Esq.	5	1 0	200	36·0	29·50	192	155
Cape Wrath	Com'rs. of N. Lighthouses	5	0 9	346	..	32·92	227	178
5.—LOCH LAXFORD & C. 256 sq. mi.								
D Loch More (Achfary)	Mr. J. Munro	5	1 0	137	75·8	67·29	241	203
6.—ENARD BAY. 138 sq. mi.								
7.—INSULAR. 2 sq. mi.								
CAITHNESS. (Area, 696 sq. mi.).								
1.—BERRIEDALE, DUNBEATH & C. 169 sq. mi.								
Berriedale (Langwell)	Duke of Portland	5	1 6	150	33·8	26·66	..	..
Clythness	Com'rs. of N. Lighthouses	5	1 5	133	29·6	22·34	..	..
2.—WICK & C. 184 sq. mi.								
D Wick (C. Guard Stn.)	Station Officer (M.O.)	8	1 2	81	29·9	24·49	209	143
Nosshead	Com'rs. of N. Lighthouses	5	0 9	129	25·1	20·86	..	..
3.—THURSO & C. 238 sq. mi.								
D Thurso (Buckies)	J. H. M. Davidson, Esq.	5	0 1	240	39·0	29·22	190	159
Thurso (Holburn Head)	Com'rs. of N. Lighthouses	5	0 8	68	..	25·88	..	..
Dunnet Head	Com'rs. of N. Lighthouses	5	1 0	331	30·2	24·21	..	..
Duncansby Head	Com'rs. of N. Lighthouses	5	..	196	31·4	22·23	..	..
4.—FORSS & C. 104 sq. mi.								
D Reay (The Manse)	Rev. Dugald Carmichael	9	1 0	49	36·2	28·65	240	158
5.—INSULAR. 1 sq. mi.								
Stroma	Com'rs. of N. Lighthouses	5	3 0	54	25·5	25·10	204	154
ORKNEY. (Area, 389 sq. mi.).								
Pentland, Skerries Lighthouse	Com'rs. of N. Lighthouses	5	3 0	70	..	23·61	223	143
Hoy (Cantickhead)	Com'rs. of N. Lighthouses	5	3 10	68	*35·5*	25·42	..	..
Hoy (Graemsay Sound, High)	Com'rs. of N. Lighthouses	5	1 4	29	*35·9*	31·69	225	179
Hoy (Graemsay Sound, Low)	Com'rs. of N. Lighthouses	8	4 4	40	*36·7*	31·39	164	155
d Deerness	W. J. Moar, Esq.	5	1 0	160	35·4	24·98	(237)	(153)
D Kirkwall (Bignold Park)	The Town Council	5	1 0	113	36·9	27·73	208	160
Hellyar Holm	Com'rs. of N. Lighthouses	5	1 3	35	..	23·83	..	147
Auskerry	Com'rs. of N. Lighthouses	5	1 0	22	..	20·84	242	146
Shapinsay (Balfour Castle)	Mr. W. Liddell	5	0 6	50	32·0	26·50	..	..
d Sandwick School	J. A. Fotheringham, Esq.	5	1 4	51	..	(28·09)	..	..
Sanday (Start Point)	Com'rs. of N. Lighthouses	5	1 0	27	*32·3*	23·84	207	162
North Ronaldshay	Com'rs. of N. Lighthouses	5	0 9	22	..	22·04	..	..
SHETLAND. (Area, 558 sq. mi.).								
D Lerwick (The Nabb C. G. Stn.)	District Officer (M.O.)	8	1 0	156	..	30·65	231	162
D Lerwick (Observatory) (+A)	Meteorologist-in-Charge	8	1 0	269	38·1	34·58	242	157
Eshaness	Com'rs. of N Lighthouses		..	..	..	26·08	..	..
D Bixter (Vementry)	Andrew Tait, Esq.	5	1 1	25	..	34·66	213	165
D Baltasound (Halligarth)	T. E. Saxby, Esq., F.R.F.P.S., J.P.	5	1 0	31	42·1	37·32	302	179

IRELAND.

DIVISION XX.—MUNSTER.

STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Rain-gauge: Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
CORK. (Area, 2873 sq. mi.)		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
1.—SHANNON—Left Bank Tributaries. 79 sq. mi.								
2.—DINGLE BAY. 4 sq. mi.								
3.—KENMARE & C. 47 sq. mi.								
4.—BANTRY BAY. 197 sq. mi.								
D Garinish Island	M. Mackenzie, Esq.	5	1 0	24	*70·4*	42·73	174	149
5.—DUNMANUS BAY. 57 sq. mi.								
6.—BANDON & C. 694 sq. mi.								
D Toormoor (Altar Rectory)	Rev. R. J. Colthurst	5	0 10	60	..	32·09	189	142
D Castle Townshend (Glen Barrahane)	Sir M. P. Coghill, Bt.	5	1 3	100	*44·7*	30·89	177	145
D Castle Townshend (Seafield)	Major H. Chavasse	5	1 0	40	*47·6*	31·35	176	134
D Skibbereen (Hollybrook Farm)	Capt. C. M. Morgan	8	1 6	60	*53·6*	36·19	186	156
D Caheragh (The Rectory)	Rev. A. W. Whitley	5	1 0	98	*56·7*	36·38	188	140
Clonikilty (Shannon Vale Ho.)	T. J. Bennett, Esq.	5	1 3	135	..	30·20	..	..
D Kinsale (Scilly House)	J. J. Orr, Esq., M.D	5	1 0	62	*38·5*	28·73	160	114
D Kinsale (Nohoval Rectory)	Rev. H. Hadden	5	0 6	272	*39·0*	26·11	140	117
D Dunmanway (The Rectory)	Rev. Canon A. Wilson	5	1 6	205	61·0	40·20	203	146
7.—CORK HARBOUR. 728 sq. mi.								
D Cork (University College). (+A)	Prof. H. N. Walsh	5	1 0	57	40·0	29·05	175	122
d Cork (University College Farm)	Prof. C. Boyle	5	1 11	40	..	30·56	..	115
D Cork (Wellington Road)	R. C. Sikes, Esq., C.E.	5	2 2	120	*40·3*	29·07	168	131
D Midleton (Ballinacurra)	J. H. Bennett, Esq.	8	1 0	24	40·4	28·08	170	126
D Glanmire (Lota Lodge)	No. 1. A. F. Sharman-Crawford, Esq.	5	1 0	200	42·6	29·01	174	124
8.—WOMANAGH & C. 118 sq. mi.								
D Shanagarry (Kinoith)	Miss L. P. Strangman	5	1 0	75	*35·2*	26·77	150	118
9.—BLACKWATER. 922 sq. mi.								
D Mallow (Longueville)	R. E. Longfield, Esq.	5	1 0	310	37·3	27·41	202	141
D Mallow (Hazlewood)	E. McLysaght, Esq.	5	1 0	360	*39·5*	26·17	180	142
Kanturk (Castlecor)	Mrs. Norton Barry	..	..	..	*37·6*	28·69	188	167
10.—SUIR. 3 sq. mi.								
11.—INSULAR. 26 sq. mi.								
KERRY. (Area, 1851 sq. mi.)								
1.—SHANNON—Left Bank Tributaries. 372 sq. mi.								
D Ballylongford Rectory	Rev. C. Murray	5	3 6	25	..	28·29	186	141
2.—TRALEE BAY & C. 221 sq. mi.								

DIVISION XX.—MUNSTER—(*con.*).

STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
KERRY—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
3.—DINGLE BAY. 789 sq. mi.								
D VALENTIA (OBSERVATORY) (+A)	The Superintendent	8	1 3	30	55·7	45·15	211	155
M Gap of Dunloe (Gearhameen)	J. Casey, Esq., for M.O.	8	3 0	75	94·0	64·41	..	..
D Killarney (Flesk Mills)	J. Lawlor, Esq.	8	2 6	96	*54·9*	38·58	190	140
D Killarney (Lakeview)	Capt. Sir M. O'Connell, Bt., M.C.	5	1 0	120	*55·5*	41·45	173	153
d Killorglin (Callinafercy)	Maj. M. R. Leeson-Marshall.	5	1 0	40	*51·9*	35·87	..	150
d Bally McElligott Rectory	Rev. G. Maxwell	5	0 11	20	..	31·76	(202)	(152)
4.—KENMARE & C. 426 sq. mi.								
D Darrynane Abbey	The late Miss M. O'Connell.	5	1 0	13	51·0	37·47	204	164
D Kenmare (Dromore Castle)	Lt.-Col. E. Hood	5	0 9	90	*65·1*	46·87	203	180
D Kenmare (Sheen Falls)	Marquess of Lansdowne	5	0 5	25	*65·6*	50·49	226	170
5.—BLACKWATER. 30 sq. mi.								
6.—INSULAR. 13 sq. mi.								
WATERFORD. (Area, 715 sq. mi.)								
1.—BLACKWATER. 243 sq. mi.								
2.—COLLIGAN & C. 259 sq. mi.								
d Dunmore East	W. Lloyd, Esq.	6	1 0	30	..	30·29	..	122
3.—SUIR. 213 sq. mi.								
D Knockaderry Reservoir (No. 2)	D. Sheedy, Esq.	5	1 0	248	*41·3*	31·76	155	111
D WATERFORD (Gortmore)	Mrs. N. H. White	5	1 2	137	38·9	32·17	177	115
d Portlaw (Mayfield)	M. Sheehan, Esq.	5	0 10	25	..	(33·91)	(161)	(120)
D CARRICK-ON-SUIR (SESKIN)	L. Grubb, Esq.	8	1 0	535	*45·0*	34·58	197	125
TIPPERARY. (Area, 1660 sq. mi.)								
1.—SHANNON—Left Bank Tributaries. 582 sq. mi.								
D Birdhill (Parteen Weir)	Electricity Supply Board	5	..	50	..	27·13	189	128
D Nenagh (Traverston)	Miss A. H. Norris	5	1 0	333	*45·2*	35·63	212	161
D Nenagh (Castle Lough)	S. Parker-Hutchinson, Esq.	5	1 3	120	39·5	30·70	194	144
D Cloughjordan (Modreeny)	Capt. G. W. Whitfield	5	1 6	275	..	28·09	186	145
D Roscrea	Electricity Supply Board	5	..	..	..	28·32	182	137
d Borrisokane	Electricity Supply Board	5	1 10	200	..	(28·62)	..	..
D Terryglass (Old Court)	M. D. Hickie, Esq.	5	1 0	150	*34·5*	26·91	227	135
Terryglass (Slevoyre)	B.-Gen. C. J. Hickie, C.M.G.	8	1 0	143	*31·9*	24·14	189	115
2.—BLACKWATER. 21 sq. mi.								
3.—SUIR. 965 sq. mi.								
D Cahir (Abbey)	Mrs. W. Rochfort	5	1 0	160	39·2	27·40	181	137
D Cashel (Ballinamona)	E. W. M. Murphy, Esq.	5	1 0	262	36·8	27·34	196	127
4.—BARROW—Nore. 92 sq. mi.								
d Roscrea (Timoney Park)	S. Parker-Hutchinson, Esq.	5	1 0	475	*36·2*	(27·98)	..	121
LIMERICK. (Area, 1040 sq. mi.)								
1.—SHANNON—Right Bank Tributaries. 7 sq. mi.								

DIVISION XX.—MUNSTER—(*con.*).

STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
LIMERICK—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
2.—SHANNON—Left Bank Tributaries. 944 sq. mi.								
d Abbeyfeale (Springmount Sch.)	J. F. O'Kelly, Esq.	5	1 0	360	*41·1*	(28·49)	..	..
D Knocklong (Kilfrush)	Mrs. Gubbins.	5	1 3	312	*37·8*	27·03	190	154
D Ballingarry Presbytery	Rev. Thomas Hogan	5	1 0	308	..	24·82	186	138
D Foynes (Coolnanes)	The Lord Monteagle, C.M.G., M.V.O.	5	1 0	43	39·4	26·07	196	137
D Foynes (National School)	W. Purtill, Esq.	5	2 8	15	*39·5*	25·02	172	131
Pallaskenry	T. O'Byrne, Esq.*	.	..	..	..	(29·27)	..	..
D Limerick (Mulgrave Street)	Messrs. W. J. Shaw & Sons..	5	1 1	60	*38·5*	29·65	198	160
D Limerick (Boat Club)	W. J. C. Horne, Esq.	5	1 0	50	*38·6*	28·82	193	149
d Castleconnell Rectory	Rev. Canon L. G. Davis.	5	1 0	88	*41·2*	28·70	..	127
3.—BLACKWATER. 64 sq. mi.								
4.—SUIR. 25 sq. mi.								
CLARE. (Area, 1270 sq. mi.)								
1.—GALWAY BAY, SOUTH. 100 sq. mi.								
2.—MAL BAY & C. 294 sq. mi.								
Kilkee (Marine Parade)	R. N. Griffin, Esq.	5	1 2	50	*41·8*	31·18	203	159
D Inagh (Mount Callan)	Capt. R. G. Tottenham.	5	1 0	479	*67·2*	45·79	181	172
3.—SHANNON—Right Bank Tributaries. 854 sq. mi.								
D Ardnacrusha (Power Station)	A. St. J. Kennedy, Esq.	5	2 2	89	..	27·33	169	131
D Dromoland Castle	Dowager Lady Inchiquin...	5	1 6	45	*40·0*	32·80	193	156
D Broadford (Hurdlestown)	Lt.-Col. W. A. Bentley.	5	1 0	167	*39·7*	33·77	204	148
D Tuamgraney (Raheen Ho.)	E. MacLysaght, Esq.	5	1 0	190	*41·9*	34·41	175	154
4.—INSULAR. 22 sq. mi.								

DIVISION XXI.—LEINSTER.

WEXFORD. (Area, 902 sq. mi.)

1.—BARROW. 43 sq. mi.								
2.—OWENDUFF & C. 240 sq. mi.								
D Foulks Mills (Longraigue)	Miss J. Deane.	5	1 1	220	39·3	34·90	149	122
3.—SLANEY & C. 467 sq. mi.								
D Johnstown Castle	Lady Maurice Fitzgerald...	5	1 0	201	*37·0*	32·62	139	118
D Enniscorthy (Woodbrook)	Col. S. W. W. Blacker, D.S.O. .	5	1 0	370	*48·8*	47·92	156	147
4.—OWENAVORRAGH & C. 146 sq. mi.								
D Gorey (Courtown House)	Earl of Courtown.	5	1 0	60	34·7	30·27	143	101
D Gorey (Ram's Gate)	Lt.-Cmdr. A.C.L.Ellis, R.N.R.	5	4 2	170	..	31·99	133	109
5.—OVOCA & C. 6 sq. mi.								
KILKENNY. (Area, 798 sq. mi.)								
1.—SUIR. 162 sq. mi.								
D Piltown (Bessborough)	The Earl of Bessborough...	8	3 7	60	..	29·87	163	111

* *Per* Irish Rainfall Association.

DIVISION XXI.—LEINSTER—(*con.*).

STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
KILKENNY—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
2.—BARROW—Nore. 527 sq. mi.								
d Thomastown (Mall House)	J. Molony, Esq	.	..	90	..	(29·42)	(166)	(122)
D **Castlecomer House**	**Capt. R. H. Prior-Wandesforde**	**5**	**1 0**	**380**	***39·6***	29·04	168	124
3.—BARROW. 109 sq. mi.								
WICKLOW. (Area, 781 sq. mi.)								
1.—BARROW. 12 sq. mi.								
2.—SLANEY. 200 sq. mi.								
D **Shillelagh (Coollattin Gardens)**	**Mr. F. W. Cox**	**5**	**0 9**	**383**	**41·9**	32·64	141	122
3.—OVOCA & C. 241 sq. mi.								
d Rathdrum (Avondale)	Lands & Fisheries Dept.	5	1 0	400	..	37·18	..	104
4.—VARTRY & C. 193 sq. mi.								
D **Rathnew (Clonmannon)**	**R. H. S. Truell, Esq**	**5**	**1 6**	**27**	***33·1***	29·71	150	107
D **Roundwood (Vartry Lodge)**	**Dublin Corporation**	**5**	**1 3**	**720**	***45·0***	33·78	164	113
Roundwood	**Dublin Corporation***	**5**	**1 8**	**750**	***44·6***	33·16	..	..
D NEWCASTLE (Killadreenan)	The Med. O. Nat. Hos. Cons.	8	1 2	256	***36·0***	29·21	152	108
D **Delgany (Elsinore)**	**Miss N. G. Moore**	**8**	**1 4**	**260**	..	31·88	158	110
D **Greystones (Burnaby Lodge)**	**Capt. C. H. West**	**5**	**1 0**	**95**	..	31·87	158	102
5.—LIFFEY & C. 135 sq. mi.								
D **Blessington Rectory**	**Rev. W. Reeves Scully**	**5**	**0 8**	**670**	***38·0***	28·98	201	148
CARLOW. (Area, 346 sq. mi.)								
1.—BARROW—Nore. 9 sq. mi.								
2.—BARROW. 216 sq. mi.								
Bagnalstown (Fenagh House)	**D.R.P.Beresford,Esq.O.B.E.**	**5**	**1 0**	**340**	**34·9**	26·91	169	124
D **Carlow (Belmont)**	**Capt. E. M. Thomas**	**5**	**1 0**	**191**	***34·8***	28·09	138	127
D Carlow (Browne's Hill)	B.-Gen. R. Browne Clayton.	5	1 0	291	34·1	25·81	133	112
3.—SLANEY. 121 sq. mi.								
d Rathvilly (Lisnavagh Gardens)	C. E. Faulkner, Esq.	5	2 6	400	***36·9***	25·94	..	125
D **Hacketstown Rectory**	**Rev. C. S. S. Ellison**	**5**	**1 6**	**590**	**39·5**	32·76	190	131
LEIX (Area, 664 sq. mi.)								
1.—SHANNON—Left Bank Tributaries. 25 sq. mi.								
2.—BARROW—Nore. 339 sq. mi.								
D **Abbey Leix (Blandsfort)**	**Mrs. Hum Bland**	**5**	**1 0**	**532**	**36·5**	29·98	183	141
D Mountrath (Baunreagh)	Lands & Fisheries Dept.	5	1 0	810	..	41·25	174	147
3.—BARROW. 300 sq. mi.								
D MOUNTMELLICK (Summer Grove)	W. A. Robinson, Esq.	**5**	**1 0**	**252**	***38·5***	33·53	191	142

* *Per* Irish Rainfall Association.

DIVISION XXI.—LEINSTER—(*con.*).

STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Rain-gauge: Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or mor	1933. Days with ·04 in. or more.
OFFALY (Area, 772 sq. mi.)		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
1.—SHANNON—Left Bank Tributaries. 560 sq. mi.								
D BIRR CASTLE	The Earl of Rosse	8	1 0	173	32·6	26·06	196	125
D Meelick (Victoria Lock)	Office of Public Works	5	1 0	121	*29·9*	25·77	185	128
d Banagher	Electricity Supply Board	5	1 6	130	*30·8*	26·85	..	131
D Tullamore (St. Vincent's Hosp.)	Dr. G. A. Moorhead	5	1 0	225	*32·6*	26·96	208	136
D Ferbane (Turraun Peat Works)	Leinster Carbonizing Co.	8	1 2	165	*32·5*	23·73	171	128
D Ballycumber (Bellair Ho.)	Mrs. F. B. Mulock	5	..	290	*33·9*	27·36	206	140
2.—BARROW—Nore. 5 sq. mi.								
3.—BARROW. 156 sq. mi.								
Edenderry (Tubberdaly Ho.)	J. Murphy, Esq	5	1 6	330	*33·5*	24·10	..	..
4.—BOYNE. 51 sq. mi.								
D Edenderry (The Tunnel)	C. T. Calwell, Esq	8	3 7	265	..	(22·57)	142	118
KILDARE. (Area, 654 sq. mi.)								
1.—BARROW. 332 sq. mi.								
d Athy (Cromaboo Bridge)	Office of Public Works	5	0 11	185	..	(22·67)	(149)	(107)
D Monasterevin (Pass Bridge)	Office of Public Works	5	0 8	208	..	24·26	183	121
2.—LIFFEY. 246 sq. mi.								
d Straffan House	F. B. Barton, Esq	5	1 0	256	31·4	(24·97)	(138)	(116)
d Clongowes Wood College	The Principal	8	1 4	246	*30·2*	(24·30)	(183)	(132)
3.—BOYNE. 76 sq. mi.								
DUBLIN. (Area, 354 sq. mi.)								
1.—VARTRY & C. 23 sq. mi.								
D Shankill (Sherrington)	Lt.-Col. J. C. W. Erck	5	1 0	115	*29·6*	23·91	135	116
Killiney (Rathleigh)	H. R. Maunsell, Esq	5	3 6	..	*28·1*	20·26	..	..
2.—LIFFEY & C. 188 sq. mi.								
D Stillorgan (Vartry Ho.)	Dublin Corporation	5	1 0	264	*28·0*	24·32	155	109
D Stillorgan (Service Reservoir)	Dublin Corporation	5	..	265	..	24·36	152	107
D Stillorgan (Farmleigh)	T. Jackson, Esq	5	1 1	220	*32·8*	23·02	149	109
D Kingstown (Harbour Yard)	Office of Public Works	8	1 0	52	*28·3*	21·27	125	89
D Kingstown (Tivoli Terr. S.)	Capt. L. B. Merideth	5	1 0	131	..	19·46	134	93
D Kingstown (People's Park)	Dr. T. J. Lydon	8	1 6	25	..	19·43	158	102
D RATHFARNHAM Castle	The Rev. Father the Rector.	8	1 0	169	*28·4*	23·40	171	105
d Belgard Castle	Capt. A. F. Maude	5	1 6	400	*27·2*	23·30	..	98
D Rathmines (Neville Road)	T. H. Mason, Esq	5	1 0	100	*28·0*	22·89	137	109
D Donnybrook (Anglesea Road)	F. C. D. Joynt, Esq	5	1 0	30	*27·9*	22·82	147	104
D DUBLIN CITY (FitzWilliam Square)	Sir J. W. Moore, M.D., D.Sc.	8	1 6	54	27·4	19·26	163	100
d Dublin (Ringsend Pumpg. Stn.)	G. S. Harty, Esq., C.E.	10	0 9	23	*26·3*	18·28	..	93
D DUBLIN (TRINITY COLLEGE)	R. W. Ditchburn, Esq.	8	1 0	13	26·1	18·95	155	101
D DUBLIN (PHŒNIX PARK)	The Director of O.S. Office.	8	1 0	155	27·6	21·38	178	109
D HAZELHATCH (PEAMOUNT SAN.)	The Superintendent	5	1 0	366	..	23·64	161	116
D Clontarf (Pumping Station)	G. S. Harty, Esq., C.E.	5	3 9	17	*24·4*	18·87	170	108
D GLASNEVIN (Botanic Gardens)	The Keeper	8	1 0	55	27·9	20·80	165	104
d Howth (Danesfort)	Mrs. H. E. Guinness	5	1 0	460	..	19·40	138	107
D Howth Castle	J. Gaisford St. Lawrence, Esq.	5	1 9	35	*82·7*	19·42	133	102

DIVISION XXI.—LEINSTER—(*con.*).

STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Height of Ground above Sea Level.	Average Rainfall.	1933. Rainfall.	Days with ·01 in. or more.	Days with ·04 in. or more.
DUBLIN—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
3.—NANNY, DELVIN & C. 142 sq. mi.								
D Malahide (Seamount)	J. G. Jameson, Esq.	5	1 0	150	*28·0*	20·13	157	112
D Lusk (Nevitt)	W. Monks, Esq.	5	1 0	139	*29·2*	20·06	188	110
D Skerries (Milverton Hall)	Capt. E. G. Woods	5	1 0	190	*28·0*	20·48	155	116
D Balbriggan (Ardgillan)...No.1.	Capt. E. R. Taylor	5	1 0	203	29·0	21·40	181	121
4.—INSULAR. 1 sq. mi.								
D Lambay Island	Lord Revelstoke	5	1 0	20	*27·4*	17·47	127	87
MEATH. (Area, 909 sq. mi.)								
1.—SHANNON—Left Bank Tributaries. 32 sq. mi.								
2.—LIFFEY & C. 72 sq. mi.								
D Dunboyne (Stirling, Clonee)	Mr. J. Pilkington	8	1 0	231	*33·3*	23·86	169	121
3.—NANNY, DELVIN & C. 150 sq. mi.								
4.—BOYNE. 560 sq. mi.								
D Summerhill House	Mr. W. Lauder	5	1 0	372	*33·7*	(25·29)	156	126
D Dunsany Castle Gardens	Mr. J. B. Pow	5	1 0	323	*33·8*	24·43	174	134
D Athboy (Frayne)	Dr. Beryl F. E. Moore	5	0 9	310	..	25·32	202	130
D Beauparc (St. Cloud)	W. J. Hopkins, Esq.	5	1 0	215	*31·5*	26·45	179	133
D Kells (Headfort)	The Marquis of Headfort...	8	1 0	227	37·0	26·64	170	129
5.—DUNDALK BAY. 95 sq. mi.								
WESTMEATH. (Area, 712 sq. mi.)								
1.—SHANNON—Left Bank Tributaries. 517 sq. mi.								
D Athlone	Office of Public Works....	5	1 0	116	*28·2*	28·48	161	148
[Athlone (Twyford House)	J. P. Hodson, Esq.	5	1 0	187	37·0	30·64	191	..
D Moate (Coolatore)	H. A. S. Upton, Esq.	5	1 6	369	*33·5*	29·55	200	133
D Mullingar (Belvedere House)	Mr. G. W. Roberts.	5	1 0	367	36·3	27·65	185	147
d Mullingar (Ballynegall Gardens)...	Major Hawkesworth Smyth.	5	2 3	337	*39·0*	28·22	..	136
D Castlepollard (Pakenham Hall)....	The Earl of Longford.	5	3 0	300	*36·6*	28·23	205	146
2.—BOYNE. 195 sq. mi.								
LOUTH. (Area, 316 sq. mi.)								
1.—BOYNE. 32 sq. mi.								
2.—DUNDALK BAY & C. 264 sq. mi.								
D Dundalk Rectory	Rev. T. F. Campbell.	5	1 0	10	*30·8*	24·87	191	114
D Dundalk (Ravensdale)	The Surveyor.	8	0 10	200	..	31·43	177	139
3.—CARLINGFORD LOUGH. 20 sq. mi.								
Greenore	S. Wilson, Esq.	5	1 3	20	31·9	27·86	..	119

DIVISION XXI.—LEINSTER—(*con.*).

STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
LONGFORD. (Area, 424 sq. mi.)		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
1.—ERNE. 61 sq. mi.								
d Granard	Electricity Supply Board...	5	1 6	..	..	31·58	..	..
2.—SHANNON—Left Bank Tributaries. 363 sq. mi.								
D **Ballymahon (New Castle)**	Col. W. A. King-Harman..	5	1 0	200	*36·7*	30·05	188	136
Longford (The Rectory)	Rev. H. Justice	5	1 0	185	*37·8*	28·60	174	140
D **Cloondrah**	Office of Public Works	5	1 0	132	*31·5*	26·54	204	132
D NEWTOWNFORBES (Cas. For. Gdns.)	J. Boyle for The Earl of Granard	8	1 0	154	37·6	30·23	162	144
d **Gaigue School**	Electricity Supply Board...	5	1 9	390	..	31·28	(154)	(129)

DIVISION XXII.—CONNAUGHT.

GALWAY. (Area, 2377 sq. mi.)

1.—ERIFF & C. 141 sq. mi.

2.—GALWAY BAY NORTH. 277 sq. mi.

3.—CORRIB. 846 sq. mi.

d Galway (Grammar School)	The Headmaster	5	1 0	64	40·0	(27·11)	..	..
D **Ballynahinch Castle**	H.H.Maharaja of Nawanagar	5	1 9	41	61·0	51·81	210	176
D Tuam Palace Gardens	G. H. Greenham, Esq.	5	1 0	140	..	32·66	189	152
Tuam (Gardenfield)	R. J. Kirwan, Esq., C.E.	5	1 0	155	44·1	32·49	..	..

4.—GALWAY BAY, SOUTH. 281 sq. mi.

5.—SHANNON—Right Bank Tributaries. 803 sq. mi.

D **Portumna**	Electricity Supply Board...	5	3 0	..	..	25·00	171	131
d **Ballinasloe B.N.S.**	Electricity Supply Board...	5	..	150	*36·7*	(27·90)	..	..
D **Ahascragh (Clonbrock)..(*new g*)**	The Hon. Miss Dillon	5	1 0	198	41·6	32·75	163	151
d **Mt. Bellew B.N.S.**	Electricity Supply Board...	5	1 8	200	..	(32·02)	(169)	(139)
D **Ballygar**	Electricity Supply Board...	5	..	200	..	25·97	196	130
D Glenamaddy	Electricity Supply Board ..	5	2 0	..	..	30·17	161	137

6.—INSULAR. 29 sq. mi.

ROSCOMMON. (Area, 961 sq. mi.)

1.—SLIGO BAY. 6 sq. mi.

2.—MOY. 11 sq. mi.

3.—CORRIB. 16 sq. mi.

4.—SHANNON—Right Bank Tributaries. 928 sq. mi.

d Roscommon	Electricity Supply Board ...	5	..	..	..	(26·30)	(175)	(156)
d **Lanesborough**	Electricity Supply Board...	5	1 6	140	..	(27·25)	..	135
D **Strokestown (Castlenode)**	W. J. Walpole, Esq.	5	1 0	160	35·0	28·92	175	133

MAYO. (Area, 2149 sq. mi.)

1.—SLIGO BAY. 10 sq. mi.

2.—MOY & C. 797 sq. mi.

D **Castlebar Rectory**	Rev. J. Jackson	5	1 0	145	*50·0*	40·81	215	171
D Ballina (The Rectory)	Rev. C. J. A. Harris, B.A.	12	3 3	75	..	50·83	226	177

DIVISION XXII.—CONNAUGHT—(*con.*).

STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in or more.
MAYO—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
3.—BLACKSOD BAY & C. 411 sq. mi.								
D BLACKSOD POINT	Sub-Postmistress (M.O.)	8	1 0	18	49·7	46·19	240	185
4.—CLEW BAY. 254 sq. mi.								
D Louisburgh (Old Head House)	The Marquess of Sligo	5	1 6	120	..	37·95	224	176
D Westport House	The Marquess of Sligo	5	1 0	35	46·6	35·03	209	156
D MALLARANNY	Chief Eng. G.S. Ry. Dublin.	5	1 0	113	*59·8*	53·74	218	191
5.—ERIFF & C. 121 sq. mi.								
D Aasleagh House	The Marquess of Sligo	5	1 0	30	95·2	83·36	237	199
D Delphi Lodge	The Marquess of Sligo	5	1 0	110	99·0	83·36	230	209
6.—CORRIB. 432 sq. mi.								
D Tourmakeady (Drimbawn Ho.)	Capt. E. G. Woods	5	1 0	100	*54·0*	44·40	238	139
D Claremorris (Castle MacGarrett)	Lord Oranmore and Browne.	5	0 10	200	..	35·26	196	167
7.—SHANNON—Right Bank Tributaries. 35 sq. mi.								
8.—INSULAR. 89 sq. mi.								
SLIGO. (Area, 716 sq. mi.)								
1.—DROWES & C. 49 sq. mi.								
2.—SLIGO BAY. 444 sq. mi.								
D Collooney (MARKREE CAS.)	The late Mjr. Cooper's Trus.	5	1 0	122	43·3	34·98	220	174
D Sligo (Ard-na-veagh)	R. J. Kirwan, Esq., C.E.	5	1 0	90	*41·5*	36·85	221	163
3.—MOY & C. 166 sq. mi.								
4.—SHANNON—Right Bank Tributaries. 56 sq. mi.								
5.—INSULAR. 1 sq. mi.								
LEITRIM. (Area, 615 sq. mi.)								
1.—ERNE. 152 sq. mi.								
2.—DROWES & C. 85 sq. mi.								
3.—SLIGO BAY. 135 sq. mi.								
4.—SHANNON—Right Bank Tributaries. 47 sq. mi.								
5.—SHANNON—Left Bank Tributaries. 196 sq. mi.								
D Cloone	Electricity Supply Board	5	1 6	210	..	30·13	204	145
D Drumshanbo (Lough Allen Sluice)	Office of Public Works	5	1 0	169	*36·6*	26·92	211	139

DIVISION XXIII.—ULSTER.

CAVAN. (Area, 753 sq. mi.)

1.—ERNE. 489 sq. mi.								
D Crossdoney (Kevit Castle)	Dr. F. P. Smith	5	1 0	211	*35·5*	25·27	173	137
2.—SHANNON—Right Bank Tributaries. 34 sq. mi.								
d Glangevlin	Electricity Supply Board	5	1 10	600	..	46·43	..	151
3.—SHANNON—Left Bank Tributaries. 91 sq. mi.								
4.—BOYNE. 122 sq. mi.								
5.—DUNDALK BAY. 17 sq. mi.								

DIVISION XXIII.—ULSTER—(*con.*).

STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Rain-gauge: Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
FERMANAGH. (Area, 713 sq. mi.)		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
1.—ERNE. 667 sq. mi.								
D Newtownbutler (Crom Castle)	G. R. J. Corbett, Esq.	5	1 1	200	38·7	28·57	204	136
D Enniskillen (Castle Coole)	Lady Dorothy Lowry-Corry.	5	1 0	240	*41·0*	27·61	207	133
Enniskillen (Technical School)	J. W. Mansfield, Esq.	5	0 10	165	..	(24·34)	..	..
d Enniskillen (Portora School)	The Headmaster	5	1 0	251	*40·3*	26·82	..	..
D Colebrooke	Sir Basil Brooke, Bt.	5	1 6	250	..	28·09	181	128
D Belleek (Roscor)	Mrs. Dick	5	1 0	500	..	43·25	234	198
D Belleek (Heronshaw)	T. Beacom, Esq.	5	1 2	150	*45·5*	38·55	214	197
D Castle Archdale	Mrs. Archdale	5	1 0	247	..	29·40	190	145
2.—DROWES & C. 46 sq. mi.								
MONAGHAN. (Area, 498 sq. mi.)								
1.—ERNE. 208 sq. mi.								
2.—DUNDALK BAY. 132 sq. mi.								
3.—BANN—Lough Neagh, West. 158 sq. mi.								
ARMAGH. (Area, 514 sq. mi.)								
1.—DUNDALK BAY. 118 sq. mi.								
Crossmaglen (Anamar)	P. Norris, Esq.	5	1 1	384	*36·2*	24·69	150	119
2.—CARLINGFORD LOUGH. 23 sq. mi.								
D Bessbrook (The Woodhouse)	J. S. W. Richardson, Esq.	5	1 0	260	*37·2*	29·14	179	144
3.—BANN—Lough Neagh, East. 37 sq. mi.								
D Lurgan (Belle Vue) *new g*	S. A. Bell, Esq., J.P.	5	1 0	200	29·7	20·88	171	119
4.—BANN, UPPER. 144 sq. mi.								
5.—BANN—Lough Neagh, West. 192 sq. mi.								
D Tynan Abbey	Capt. C. N. L. Stronge	5	1 0	167	..	23·28	158	121
D ARMAGH (Observatory)	(+A) The Dir. of Obsy. (M.O.)	8	1 0	204	31·7	21·59	178	121
d Richhill (Sandymount)	Mrs. C. B. Lamb	5	1 6	200	*29·3*	21·28	..	..
DOWN. (Area, 961 sq. mi.)								
1.—CARLINGFORD LOUGH. 104 sq. mi.								
D Newry (Bridge Street House)	C. Blaney, Esq.	5	1 0	23	38·1	29·38	160	127
2.—DUNDRUM BAY & C. 173 sq. mi.								
D Silent Valley (Belfast W.W.) *new g*	C. F. Wheeler, Esq., C.E.	5	1 0	426	..	40·75	180	146
D Annalong (Belfast W.W.)	C. F. Wheeler, Esq., C.E.	5	2 9	435	*47·6*	39·08	185	138
D Mourne Mount'ns (Fofanny Res.)	J. E. Croasdaile, Esq., M.A.	5	1 0	938	*64·4*	54·63	151	140
D Seaforde	T. W. Forde, Esq.	8	1 0	180	38·3	30·36	194	136
3.—STRANGFORD LOUGH. 260 sq. mi.								
d Strangford	G. L. Hildebrand, Esq.	5	0 8	30	..	27·45	..	110
D Saintfield House	Rev. E. H. Blackwood-Price.	5	0 9	300	*34·9*	27·21	216	124
Newtownards (Grey Abbey)	H. H. K. Worsley, Esq.	5	0 6	10	..	25·90	167	119
4.—COAST STREAMS. 47 sq. mi.								
D DONAGHADEE (C. Guard Stn.)	Senior Coastguard (M.O.)	8	1 0	40	31·3	27·12	195	127
D Donaghadee (Craigmore)	Dr. S. B. Coates	5	1 0	60	*30·6*	25·84	171	106

DIVISION XXIII.—ULSTER—(*con.*).

STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
DOWN—(*con.*).		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
5.—BELFAST LOUGH. 206 sq. mi.								
Annaghanoon	W. J. Gibson, Esq.	5	1 0	200	..	23·33	..	..
D Waringstown (The Forge)	W. J. Gibson, Esq.	5	1 0	187	32·2	24·32	175	122
D Hillsborough (Research Stn.)	The Secretary	5	1 0	388	..	23·82	169	121
6.—BANN—Lough Neagh, East. 7 sq. mi.								
7.—BANN, UPPER. 162 sq. mi.								
Banbridge (Observatory)	H. D. Fleming, Esq.	5	1 6	210	*32·1*	23·73	172	113
D Banbridge (Milltown)	J. E. Kennedy, Esq.	5	1 0	200	31·0	22·45	165	111
D Portadown (Moyallon House)	Mr. J. Eccles	5	0 7	130	*32·6*	22·04	168	112
8.—INSULAR. 2 sq. mi.								
ANTRIM. (Area, 1193 sq. mi.)								
1.—BELFAST LOUGH. 107 sq. mi.								
d Lisburn (School)	The Headmaster	8	1 6	208	34·1	(24·56)	(167)	(116)
D Lambeg (Glenmore House)	Linen Industry Res. Assn.	8	0 11	100	..	26·46	174	133
D Dunmurry (Warren House)	Col. H. R. €harley	5	0 10	110	..	26·63	186	130
D Belfast (Queen's University)	J. A. Badger, Esq.	5	1 0	62	34·5	26·64	175	128
D Belfast (Sewage Works)	R. B. Donald, Esq., C.E.	8	1 0	26	*35·8*	25·48	163	116
D Belfast (Cave Hill Road)	Miss C. Firth	5	1 0	200	*40·2*	30·19?	223	148
D Belfast (Oldpark Filters) *new g.*	C. F. Wheeler, Esq., C.E.	5	1 0	203	..	29·90	165	136
D§Carrickfergus (Dorisland) *new g.*	C. F. Wheeler, Esq., C.E.	5	1 0	250	..	27·37	176	134
D Carrickfergus (S. Woodburn) *new g.*	C. F. Wheeler, Esq., C.E.	5	1 0	640	..	34·52	187	150
D Carrickfergus (N. Woodburn) *new g.*	C. F. Wheeler, Esq., C.E.	5	1 0	735	..	34·77	186	156
D Carrickfergus (Copeland) *new g.*	C. F. Wheeler, Esq., C.E.	5	1 0	427	..	31·05	193	139
D Carrickfergus (L. Mourne) *new g.*	C. F. Wheeler, Esq., C.E.	5	1 0	596	..	32·26	191	144
2.—GLENARM & C. 186 sq. mi.								
D Larne (Sallagh Springs)	J. E. Croasdaile, Esq. M.A.	5	1 0	566	*50·0*	35·66	184	148
3.—BUSH & C. 193 sq. mi.								
D Ballycastle (Magherintemple)	Capt. J. Casement, D.S.O.	5	1 0	230	*42·6*	29·85	194	141
4.—BANN, LOWER. 112 sq. mi.								
5.—BANN—Lough Neagh, East. 590 sq. mi.								
D Stoneyford (Belfast W.W.) *new g.*	C. F. Wheeler, Esq., C.E.	5	1 0	453	..	27·86	161	136
D Aldergrove (Aerodrome) (+A)	Meteorological Officer	8	1 0	238	33·0	23·58	180	120
D Randalstown (Hollybrook)	N. F. Webb, Esq.	5	1 0	120	..	26·61	200	134
D Ballymena (Harryville)	J. R. Williams, Esq.	5	1 5	150	41·5	31·18	195	161
D Broughshane (Quolie)	H. O'Hara, Esq., C.E.	5	1 3	864	*47·3*	34·28	208	156
6.—INSULAR. 5 sq. mi.								
LONDONDERRY. (Area, 816 sq. mi.)								
1.—LOUGH SWILLY. 6 sq. mi.								
D Londonderry (Dunruadh)	J. H. Welch, Esq.	5	0 6	130	*40·5*	31·93	216	158
2.—BUSH & C. 9 sq. mi.								
3.—BANN, LOWER. 240 sq. mi.								
D Coleraine (Cutts House)	Maxwell Given, Esq., C.E.	8	1 0	20	*39·6*	28·55	193	138
D Coleraine (Ingledene)	W. R. Johnston, Esq.	5	6 0	55	..	25·88	194	135
4.—BANN—Lough Neagh West. 196 sq. mi.								

§Gauge over-exposed.

DIVISION XXIII.—ULSTER—(*con.*).

STATIONS.	AUTHORITIES.	Diam.	Rain-gauge: Height of Rim above Ground.	Rain-gauge: Height of Ground above Sea Level.	Rain-gauge: Average Rainfall.	1933. Rainfall.	1933. Days with ·01 in. or more.	1933. Days with ·04 in. or more.
LONDONDERRY—(*con.*)								
5.—FOYLE & C. 365 sq. mi.		*in.*	*ft. in.*	*ft.*	*in.*	*in.*		
M Glenedra (Spelhoagh Mountain)	W. Criswell, Esq., C.E.	5	1 0	1333	*60·0*	52·38	..	..
M Glenedra Hill	W. Criswell, Esq., C.E.	5	1 0	1333	*62·5*	49·95	..	..
M Glenedra Lodge	W. Criswell, Esq., C.E.	5	1 0	950	*55·6*	47·79	..	..
M§Glenedra (Altagarran Mountain)	W. Criswell, Esq., C.E.	5	1 0	1230	..	46·72	..	..
Dungiven (Labbyheige)	W. Criswell, Esq., C.E.	5	1 0	1150	..	42·12	..	..
M Altnaheglish (Altabrogy Burn)	W. Criswell, Esq., C.E	5	1 0	967	..	46·23	..	..
M Glenedra Intake	W. Criswell, Esq., C.E	5	1 0	740	..	44·70	..	..
M Altnaheglish (Glack Burn)	W. Criswell, Esq., C.E.	5	1 0	967	..	41·58	..	..
D Dungiven (Banagher Filters)	W. Criswell, Esq., C.E.	5	1 0	373	..	40·09	214	167
D Londonderry (Creggan Res.)	Mr. W. Hutchinson	8	1 0	325	41·8	33·57	249	183
D Limavady (Roevista Manse)	Rev. W. Browne	5	1 0	70	*37·0*	24·42	178	132
D Limavady (Drenagh)	M. M. McCausland, Esq.	5	1 6	80	37·0	24·87	194	139
Bellarena	Sir F. G. Heygate, Bt.	5	4 0	12	38·4	28·24	..	..
TYRONE. (Area, 1257 sq. mi.)								
1.—ERNE. 46 sq. mi.								
2.—BANN—Lough Neagh, West. 442 sq. mi.								
D Dungannon (Aloha)	Major R. Stevenson	5	1 0	275	*37·2*	29·83	201	133
D Castlecaulfield (Parkanaur)	Capt. Y. A. Burges	8	0 6	250	..	30·04	188	133
3.—FOYLE. 769 sq. mi.								
D Omagh (Edenfell)	The late Lt.-Col. J. B. Buchanan	8	1 0	280	40·1	28·66	202	161
Newtown Stewart (Barons Ct.)	Capt. E. W. Ross	5	2 4	250	*43·0*	31·53	189	157
D Sion Mills (Sion House)	Capt. J. C. Herdman	5	1 0	100	*39·0*	28·60	195	148
DONEGAL. (Area, 1875 sq. mi.)								
1.—DONAGH & C. 146 sq. mi.								
MALIN HEAD (C. G. Stn.) *New Site.*	Caretaker (M.O.)	8	1 0	83	..	31·73	206	154
2.—LOUGH SWILLY. 273 sq. mi.								
d Rathmullen (Fort Royal)	Col. J. H. Jellett	5	1 0	35	*42·5*	33·06	(229)	(162)
D Buncrana Rectory	Rev. R. P. Meredith	5	1 0	50	..	33·10	216	160
3.—SHEEPHAVEN & C. 307 sq. mi.								
D Milford (The Manse)	Miss C. P. Young	5	1 6	150	42·0	32·68	206	163
D Dunfanaghy (St. Patrick's)	W. T. Arnold, Esq.	..	..	..	*43·0*	32·57	217	181
Mulroy Gardens	Earl of Leitrim	5	..	50	..	34·54	..	..
D Rosapenna Hotel	Rosapenna Hotel Co.	5	1 0	30	..	29·09	199	157
4.—GWEEBARRA & C. 341 sq. mi.								
5.—DONEGAL BAY. 322 sq. mi.								
6.—ERNE. 68 sq. mi.								
7.—DROWES & C. 10 sq. mi.								
8.—FOYLE. 396 sq. mi.								
9.—INSULAR. 12 sq. mi.								

§ Gauge over-exposed on moor.

BRITISH RAINFALL

1933

PART IV

PERCOLATION AND EVAPORATION AT GRAYSHOTT (HAMPSHIRE) 1904–1929

By S. E. ASHMORE, B.Sc., F.R.Met.Soc.

Records of the percolation of rain water to a depth of 3 feet through natural soil were kept at Grayshott (by Mrs. Lyndon), during the 26 years 1904–1929. Readings were made at 9 a.m. each day when the rain was also measured. The dimensions of the percolation gauge were 3 ft. × 3 ft. × 3 ft. The soil was 3 inches of peat over yellow loam, typical of the district, and remained undisturbed from the time the gauge was first made. Native heather was grown but kept short. Further details are given in *British Rainfall*, 1929, p. 144.

In a normal season, percolation commences at some time during the autumn, and continues until the following spring. The fall of rain which initiated the percolation can usually be quite easily detected by examination of the records. By this means the total percolation during such a period, and also the rainfall producing the percolation, have been determined for each spell of continuous percolation. Assuming the validity of the expression

$$\text{rainfall} = \text{evaporation} + \text{percolation}$$

the evaporation for these periods was deduced. The dates indicating a spell of percolation given are the first and last days on which measurable percolation occurred.

Table I gives a list of all the occurrences of spells of continuous percolation. In many years the normal commencement and cessation of percolation has occurred, but in some, i.e. 1908–9, 1909–10, and 1927–8 percolation has been prolonged for a year. Hence for these periods the evaporation is very large, since much of the summer evaporation is included. On the other hand, isolated short periods of percolation have occurred sometimes in the summer months. This phenomenon would be less frequent on soils of a heavier character. The soil at Grayshott is very light and sandy. Such short periods of percolation occurred twice in each of the years 1912, 1915 and 1922 and once in 1920, 1921 and 1929. On several occasions in winter percolation ceased owing to the action of frost. In each case the periods during which percolation was prevented by frost were disregarded.

The last column of Table I gives the rainfall during intervening periods in which no percolation occurred (see notes to table). Rainfall

which was taken as effective in initiating percolation in the following percolation period has, of course, not been included in the totals.

On three occasions, a heavy rainstorm in a period otherwise free of percolation has been followed by a small period of percolation of duration something of the order of 1–4 hours.

(1) 2nd August, 1906. Rainfall 1·17 inch, most of which fell in a thunderstorm of 20 minutes. About ·30 inch of percolation occurred. Flood water ran down the measuring pit and the collecting can floated away. Some percolation water was upset and the figure is estimated.

(2) 24th October, 1911. 1·83 inches of rain fell. ·01 inch of percolation occurred. It appears to have taken place during very heavy rain at 18h.—it was not percolating at 21h. nor at 09h. on 25th.

(3) 5th July, 1922. 2·20 inches of rain fell. ·02 inch of percolation was measured on 5th and ·04 inch on 6th; absolutely none before or after.

TABLE I

Periods during which some Percolation occurred each day.				Rainfall in Period of no Percolation
Dates	Rainfall	Percolation	Evaporation	
	in.	in.	in.	in.
31 Aug. 1904—15 July 1905	27·47	16·77	10·70	6·50
14 Oct. 1905—19 June 1906	24·47	18·21	6·26	(1) 8·03
9 Oct. 1906—31 July 1907	26·57	16·44	10·13	4·81
15 Oct. 1907—21 June 1908	27·48	19·84	7·64	2·90
(a) 31 Aug. 1908—16 Aug. 1909	32·00	14·93	17·07	2·86
(b) 14 Sept. 1909—19 Sept. 1910 ..	39·47	24·21	15·26	0·11
14 Oct. 1910—8 June 1911	25·69	19·61	6·08	(2) 9·92
30 Oct. 1911—17 April 1912	28·01	26·33	1·68	4·02
3—14 July 1912	2·26	0·27	1·99	2·02
5 Aug.—18 Sept. 1912	6·12	4·19	1·93	—
29 Sept. 1912—26 May 1913	33·48	28·57	4·91	4·25
5 Sept. 1913—25 April 1914 ..	29·99	23·71	6·28	12·67

TABLE I—*continued.*

Periods during which some Percolation occurred each day.				Rainfall in Period of no Percolation
Dates	Rainfall	Percolation	Evaporation	
	in.	in.	in.	in.
25 Nov. 1914—5 May 1915	27·93	27·22	0·71	
17—31 May 1915	3·87	1·86	2·01	—
4 Aug.—15 Sept. 1915	3·53	1·12	2·41	6·43
30 Sept. 1915—26 May 1916	34·06	27·78	6·28	—
2 Sept. 1916—11 May 1917	29·30	23·60	5·70	5·84
1 Aug. 1917—20 May 1918	30·21	22·17	8·04	6·53
18 Sept. 1918—18 May 1919	33·89	27·39	6·50	7·35
1 Dec. 1919—21 May 1920	20·22	18·24	1·98	9·29
5 July—7 Sept. 1920	8·19	3·65	4·54	1·97
17 Sept. 1920—27 April 1921 ..	17·73	14·47	3·26	—
8—22 May 1921	1·74	0·23	1·51	·01
1 Jan—12 May 1922	17·72	14·80	2·92	9·47 (3)
14—26 July 1922	1·28	0·74	0·54	5·88
7—24 Aug. 1922	1·69	0·74	0·95	0·58
31 Aug. 1922—23 June 1923	28·48	25·00	3·48	0·55
3 Oct. 1923—22 June 1924	30·35	25·24	5·11	6·36
28 July 1924—8 June 1925	43·37	35·34	8·03	1·98
23 Aug. 1925—29 June 1926 ..	34·24	28·30	5·94	5·52
27 Oct. 1926—2 May 1927	23·93	22·76	1·17	6·16
(c) 1 July 1927—11 July 1928	49·44	37·36	12·08	1·61
17 Oct. 1928—6 April 1929	16·83	15·97	0·86	5·34
6—28 May 1929	2·73	0·91	1·82	0·77
				8·52*
Totals	763·74	587·97	175·77	148·25

* to October 23rd, 1929.

[*Note by Editor, British Rainfall.*

Mr. Ashmore has been good enough to set out the Grayshott percolation record in the above form in response to a suggestion of my own. A percolation gauge will discharge water so long as the water content of the soil exceeds the amount required for saturation. The difference between the amount of water discharged and the rainfall incident on the gauge represents losses due to evaporation and assimilation by any plants growing on the gauge. A useful estimate of the natural losses from similar soils with similar drainage and vegetation cover is thus obtained. When the gauge ceases to discharge water, however, it ceases to possess value as a means of ascertaining such losses in any quantitative sense. We can, it is true, say that during such a period so much rain fell without producing saturation of the soil to the depth of the gauge, but that figure certainly falls short of the actual loss which occurs in nature. It is clearly advantageous, therefore, to separate the periods of percolation from the periods of no percolation when any attempt is made to compare records of percolation and of rainfall.

The results now given by Mr. Ashmore are of interest from various points of view. They show that during times of percolation the aggregate loss over a period of 26 years was 175·77 inches or 23 per cent. of the incident rainfall. In periods comprising mainly winter months, e.g. 25th November, 1914 to 5th May, 1915, the loss was usually small. The records contain three examples, marked (a), (b) and (c) in Table I, of percolation going on continuously for a period of approximately 12 months. The losses in these periods were respectively 17·07, 15·26 and 12·08 inches. The mean of these is 14·8 inches, which is not very different from the mean annual evaporation from an open water surface at Camden Square, London (15·5 inches)].

THE AVERAGE ANNUAL RAINFALL OVER THE COUNTY OF LONDON.

By JOHN GLASSPOOLE, M.Sc., Ph.D.

The first rain-gauge ever designed for use in London was, according to Symons,[1] that which Dr. (later Sir) Christopher Wren showed to the Royal Society on January 22nd, 1662. It was a tipping-bucket gauge consisting of a wedge-shaped bucket which, when filled to a certain height, tipped and emptied itself. Although Sir Christopher probably took the gauge home and recorded the readings regularly, no trace of his observations have been found. The earliest record available for London is that maintained by the Royal Society at Crane Court for the years 1729 to 1735. There are no further records until 1774, when the Royal Society commenced a meteorological diary, which included details of the rainfall. Subsequently, at least one record is available for each year for stations somewhere in the County of London.

The first detailed examination of the records maintained in London was that carried out by Mr. G. Dines, with a view to defining the fluctuations in the annual, monthly and daily rainfall over as long a period as possible. The Dines Diagram of the *Rainfall of the London District*, published as an appendix to the *Quarterly Weather Report*, 1873 (Meteorological Office publication), gives details of the rainfall for each month during the sixty years 1813 to 1872 and mean daily amounts for the period 1826 to 1872. This diagram was based mainly on the records for Chiswick, Cobham and Greenwich, which commenced in 1826, 1825 and 1815 respectively, and included that maintained by Luke Howard at Plaistow. The diagrams have since been extended by Mr. J. S. Dines to cover the hundred years 1813 to 1912 and the revised diagrams are now on sale by H.M. Stationery Office. Monthly totals are given in the article on *One Hundred Year's Greenwich Rainfall*, 1815–1914, published in *British Rainfall*, 1915, pp. 35–39. The values given in the Dines Diagrams, together with the Royal Society record and earlier records, give sufficient information to define the variations month by month in London since 1774. This information was incorporated with that for other stations in

[1] "A contribution to the History of Rain-gauges," Q.J.R. Meteor. Soc., 1891, pp. 127-142. The only earlier gauge, apart from those used in Korea in the fifteenth century, appears to be that made by Castelli, in Italy, in 1639.

England and Wales to give the series of general monthly rainfall from 1727 to 1931 published in *British Rainfall,* 1931, pp. 299–306.

The number of records maintained in London has steadily increased. For the year 1880 some 8 stations to the south of the Thames and 20 stations to the north furnished complete records. It is only since 1903 that stations in the County of London have been shown separately in *British Rainfall.* In earlier volumes the stations are given either under Middlesex, Surrey, Essex or Kent. In *British Rainfall,* 1919, the numbers for the south and north of London were 23 and 49 respectively. There are obvious difficulties in obtaining an orthodox site for a rain-gauge on ground level and in a number of cases the gauges were exposed on roofs. During the period 1921 to 1924 most of the stations in London were inspected and it was found that a sufficient number of orthodox sites were available in parks and gardens to permit of the records from such stations only to be used. Subsequently records from gauges on roofs and from non-standard gauges were in general not included in *British Rainfall.* This accounts for the slight decrease in the number of records printed during more recent years. In *British Rainfall,* 1932, the numbers for south and north London were 19 and 35 respectively, eighteen fewer than in 1919. By the end of 1932 a very large number of rainfall records had been accumulated. It was found that there were some 200 different records covering at least one year during the period 1881 to 1932. Of these records only two are complete for this period, *viz.* those at Greenwich Observatory and St. Pancras (Camden Square). The records made at Deptford Pumping Station, Stoke Newington (Lordship Road) and Regent's Park (Royal Botanic Gardens) just failed to be complete and homogeneous for this period. While much of the information has been provided by private observers who have set up a rain-gauge and obtained a record for their own personal interest, a good many records have been supplied by the Metropolitan Water Board and the London County Council. These records are maintained either at district offices, reservoirs or pumping stations, in connection with the supply of water to London; at pumping stations dealing with the discharge of flood water into the Thames and the disposal of sewage, or in certain of the London parks. The parks naturally give sites most suited for the maintenance of a rainfall record and such records are used mainly to supplement the information available to the Engineer's Department of the London County Council, in connection with the occurrence of intense falls of rain in short periods.

In the case of complete records for the 35 years, 1881 to 1915, the mean of the 35 annual amounts was taken, while in other cases the mean annual rainfall was adjusted by reference to the records complete for the whole period, using the method set out in the article on the Rainfall of Norfolk, *British Rainfall,* 1928, pp. 270–285. In the case of records in London the ratio stations used for this purpose

were Greenwich Observatory, St. Pancras (Camden Square) and Kew Observatory, which is just to the west of the County. The ratios were obtained by expressing the rainfall year by year at each of these three stations as a percentage of the average annual rainfall at each station. The percentage values year by year were similar at the three stations. The mean of the three values for each year was, therefore, adopted. Thus, in 1881, the rainfall at Greenwich, Camden Square and Kew was 110, 114 and 107 per cent. of the respective annual averages, and a mean of 110 was adopted as the ratio to be used for correcting any record at other stations for 1881, to give a computed average for the standard period 1881 to 1915. In the case of the first station on the list, *viz.* Southwark Park, a record was maintained for the years 1925 to 1932 and gave a mean of 26·15 in. The ratio stations show that during these eight years the mean annual rainfall was 107 per cent. of the average, so that the computed average becomes 24·4 in. More weight can naturally be attached to the computed average when the record is longer than that for Southwark Park.

When the values were plotted on a map, it was found that the isohyetal lines over the County of London could not be drawn for the outlying districts in a satisfactory manner, without similar data for stations just outside the County. Additional averages were, therefore, computed for stations in parts of Surrey, Kent, Middlesex and Essex. The stations selected in Surrey, Kent and Essex were so near to the County of London that the same ratios were used. Stations required in Middlesex grouped themselves naturally into western and eastern areas. In the case of the former, the ratio stations used were Slough (Langley), St. Pancras (Camden Square) and Kew Observatory, while for the other area records maintained at St. Pancras (Camden Square) and Muswell Hill (Colney Hatch Lane) were used.

All the computed averages were initially plotted in their appropriate places on a map, scale 2 mi. to 1 in. As a result of the inspection during the years 1921 to 1924, those records which were from standard gauges in orthodox exposures were known. Moreover, in many cases orthodox sites were selected at the time of the inspection and by the end of 1932 records had become available for a sufficiently long period to enable a reliable average to be computed. In the case of the first station on the list, *viz.* Southwark Park, records were maintained before 1925 but a standard gauge was not brought into use until after the inspection and the computed average included in the table is that based on the record for 1925 to 1932 only. The list includes only one record for each station, although in some cases records from check gauges were also available. Averages computed from records covering less than five years are not included in the list, and were not given full weight in drawing the isohyetal lines. Averages based on records which had terminated before 1921 were examined on the map, in comparison with those which had already been accepted

as a result of the inspection. The list published at the end of this article gives all the averages which, as a result of this critical examination, appear to be values representative of the actual average rainfall for the standard period 1881 to 1915. The period of the record on which the averages are based is also given. In the case of records covering the period 1881 to 1915 the average given is the mean annual rainfall for that period, even when the records were continued up to 1932. The list includes averages for the following numbers of stations in the various counties :—

London, South	38
,, North	45
Surrey	21
Kent	21
Middlesex	53
Essex	12
Total	190

The average annual rainfall increases fairly steadily over the County of London from just less than 21 in. in the extreme east, near the main river, to rather more than 25 in. in parts of the high land in the extreme south and just over 26 in. in the extreme north. The range over the whole map is from 20·8 in. at the Northern Outfall Sewage Works, to the east of Beckton, to 27 in. at Bushey Heath in the extreme north-west. The relation of the annual rainfall to the configuration of the land is well marked. The region with less than 22 in. is confined to the neighbourhood of the main river below the Isle of Dogs and to part of the area drained by the River Roding. The rainfall over the Port of London varies from about 21½ in. at the Royal Albert Docks to about 23 in. at the Surrey Docks in Rotherhithe. There is less than 23 in. over a large area in the north-east, including much of the land drained by the Rivers Lea and Roding, as well as over small areas near Deptford Creek, over part of Fulham and at Hampton in the extreme south-west. Above Southwark Bridge a large area in the neighbourhood of the main river receives between 23 and 24 in. The rainfall is about 23½ in. at St. Paul's, Buckingham Palace, the Science Museum, Olympia and Wormwood Scrubs to the north and at the Oval, Clapham Junction, Barnes and Kew Gardens to the south. The average rainfall along Regent's Canal varies from 24½ in. at Alperton, at the Grand Junction Canal, to just over 25 in. at the Zoological Gardens, while further east the average decreases steadily to 23 in. at Victoria Park. The largest area with more than 24 in. includes the north-west of London. In this area there is more than 25 in. at Hanger Hill, Ealing, near Harrow, as well as over a large area from Pinner to Hornsey, stretching as far south as Regent's Park. More than 26 in. occurs at Hampstead and over a large area

stretching from Stanmore to Alexandra Palace and Crouch End, with about 27 in. from Bushey Heath to Elstree. More than 24 in. also occurs to the north of the River Thames on the ridge of high land stretching south from Epping Forest. Over the southern half there are a number of areas with more than 24 in., *viz.* from Teddington to Wimbledon, from Wandsworth Common to Sidcup, to the south of Greenwich and over Shooters Hill. More than 25 in. occurs over only small areas to the south of the Thames, *viz.* over Kingston Hill, Wimbledon Common, near the Crystal Palace and from Bromley to Sidcup.

As already pointed out there is a marked increase in the amount of the average annual rainfall from the low lying areas near the main river to the higher land of the north and south. Stanmore, to the north-west of London, at 400 ft. receives 27 in., compared with 22 in. at Fulham, an increase of about 1·2 in. per 100 ft. In the neighbourhood of Hampstead and at Upper Norwood, with about 26 in. and 25 in. respectively, there is an appreciable area 300 ft. above sea level, while in the neighbourhood of the Thames the rainfall is about 23 in. This gives an increase per 100 ft. of 1·0 and ·7 in. respectively. On Wimbledon Common and Kingston Hill, at 150 ft., the rainfall is 25·3 in. compared with 23·3 in. at Twickenham, an increase of 1·3 in. per 100 ft. In the neighbourhood of London the increase in the average annual rainfall with height is therefore rather more than 1 in. per 100 ft. In the mountainous districts of the west of England and Wales increases occur of as much as 5 in. per 100 ft.

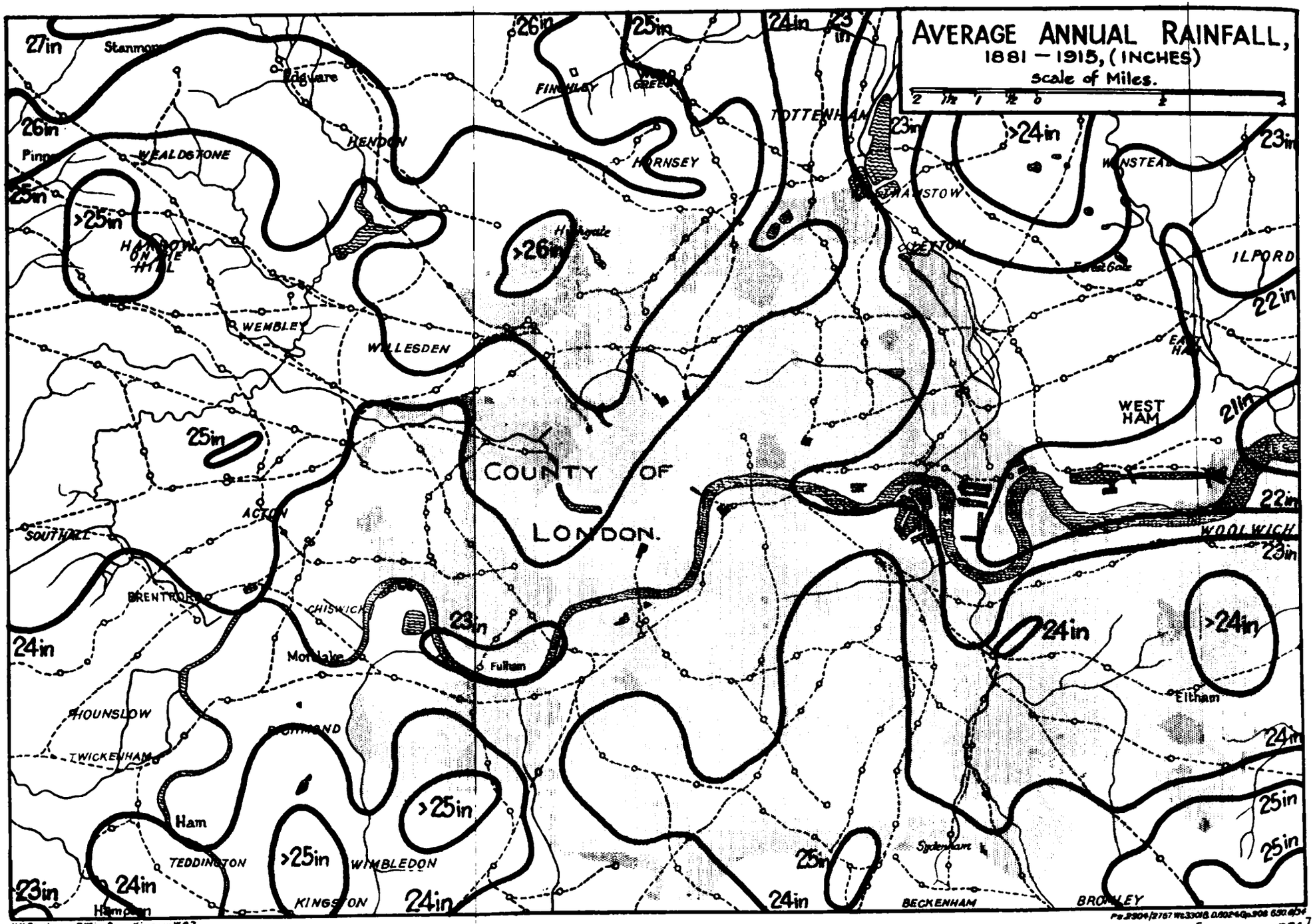
There is only a slight decrease in the average rainfall in the neighbourhood of the main river from Twickenham to Waterloo Bridge, but further east the decrease is more marked. This falling off in the rainfall is related to the fact that the valley of the Thames opens out here considerably. At West Ham and Rainham the distance between land above 100 ft. to the north and south of the river is as much as 7 miles.

The map also brings out the following points :—(a) the driest part is the east of London near the river, (b) the northern half is wetter than the southern half, (c) the north-west is wetter than the south-west, (d) the south-east is wetter than the north-east.

The average annual rainfall over the County of London for the standard period 1881 to 1915 is estimated at 23·7 in.

It is interesting to compare the rainfall over the County of London with that of Paris as defined recently by M. Louis Besson.[1] The general rainfall over Paris is 24½ in. or ¾ in. more than that of London. The rainfall varies from rather less than 23 in. over the islands on the

[1] Annales des Services Techniques D'Hygiene, Tome XI, 1930, Paris.



H.M. Stationery Office Press, Kingsway W.C.2.

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Seine in the centre of Paris to 26 in. in the extreme west and 27 in. in the east, compared with a range of from 21 to 25 or 26 in. over the County of London. At Versailles the average is about 24½ in.

Although the mapping of the average annual rainfall over various counties was commenced as long ago as 1903, when Dr. H. R. Mill contributed a chapter on rainfall to the series of Water Supply Memoirs published by the Geological Survey, the present article includes the first map to be published, defining the distribution of the average rainfall over the County of London. There is sufficient information to define the average annual rainfall with some precision in all parts of London, except perhaps in the following localities where additional records would be welcomed:—Dalston, Bethnal Green, Stepney, Wapping, Southwark, Newington, Camberwell, Richmond Park and North Wembley. In view of the lack of open spaces there would be difficulties in securing a suitable site for the gauge in all but the last two localities.

The computations involved in the preparation of the averages have been carried out by Mr. J. A. Sturch.

County, Riv. Division and Station.	Period.	Computed average.
LONDON.		in.
1. THAMES—RIGHT BANK TRIBUTARIES		
Southwark.		
Bermondsey.		
Southwark Park	1925–1932	24·4
Lambeth.		
West Norwood (Thornlaw Rd.)	1900–1910	24·6
Streatham Hill (Wavertree Rd.)	1892–1903	23·8
Brockwell Park	1925–1932	23·8
Brixton Hill Reservoir ..	1927–1932	23·9
Brixton (Acre Lane) ..	1881–1905	23·9
Battersea.		
Clapham Park (New Park Rd.)	1895–1910	23·7
Clapham Common (Macaulay Rd.) ..	1904–1917	23·3
Battersea Park	1925–1932	23·2
Wandsworth.		
Streatham (Conyers Rd.)	1924–1932	23·3
Streatham Hill Reservoir	1924–1932	23·3
Balham (High Road) ..	1912–1932	24·7
Wandsworth Common (Patten Rd)	1892–1926	24·1
Southfields (Coronation Gardens)	1912–1932	23·6

County, Riv. Division and Station.	Period.	Computed average.
Wandsworth—*contd.*		in.
Southfields (Wincanton Road) ..	1923–1928	24·3
Wimbledon Common (Richmond House) ..	1900–1905	25·3
Wimbledon Park (Woodhouse)	1900–1914	25·6
Putney Vale Cemetery ..	1895–1899	23·9
Camberwell.		
Dulwich (Wood Road) ..	1890–1913	24·8
Dulwich (Alleyn Park) ..	1911–1916	24·8
Deptford.		
Waterworks	1923–1932	23·0
Greenwich.		
Deptford Pumping Station	1924–1932	22·4
Royal Observatory ..	1881–1915	23·5
Blackheath (Westcombe Park Road) ..	1888–1893, 1917–1932	23·2
Lewisham.		
Grove Park (The Avenue)	1921–1926	23·9
Forest Hill (Border Lodge)	1882–1887	24·4
Forest Hill (Newfeld Hse.)	1884–1911	23·7
Forest Hill Reservoir ..	1890–1932	24·6
Lewisham (Clarendon Rd.)	1911–1932	24·6
Blackheath	1881–1892	23·6
Blackheath Park (Elmsdale)	1886–1898	23·5
Blackheath (Eastcombe Villas)	1895–1904	23·2

County, Riv. Division and Station.	Period.	Computed average.
Woolwich.		in.
Southend (Victoria Road)	1884–1890	24·8
Eltham (High Street) ..	1893–1932	23·2
Eltham (Clifden).. ..	1891–1904	23·5
Shooters Hill	1885–1889	24·3
Woolwich (Plumstead Common)	1911–1918	23·1
Woolwich (Powis Street)	1889–1895	22·9
2. THAMES—LEFT BANK TRIBUTARIES		
Kensington.		
Harley Gardens	1920–1932	23·7
South Kensington Museum	1889–1905	24·8
Holland House	1925–1932	23·9
Cam House Gardens ..	1916–1931	24·2
Campden Hill Resr. ..	1883–1932	24·5
Kensington Palace ..	1919–1932	24·8
Lansdowne Crescent ..	1882–1890	24·4
Hammersmith.		
The Creek	1924–1932	23·2
Fulham.		
Acfold Road	1912–1923	22·9
Hammersmith Cemetery	1912–1932	23·4
Chelsea.		
Physic Gardens	1925–1932	23·4
St. Luke's Gardens ..	1889–1932	23·3
Westminster.		
St. George's Square ..	1915–1923	23·1
Buckingham Palace Gdns.	1906–1932	23·5
St. James's Park ..	1915–1932	23·2
St. Marylebone.		
Gloucester Place ..	1890–1897	24·0
Northwick Terrace ..	1902–1911	24·7
Royal Botanic Gardens ..	1881–1915	25·1
Hamilton Terrace	1881: 1893–1915	24·4
Paddington.		
Norfolk Terrace	1889–1905	24·6
Kensal Green (Harrow Rd)	1907–1917	23·8
Hampstead.		
Frognal and Akenside School	1906–1913	25·8
Rosalyn House	1881–1895	26·0
Branch Hill Lodge ..	1881–1900	26·0
Hampstead Observatory	1910–1932	26·3
Golder's Hill Park ..	1925–1932	26·2
St. Pancras		
Camden Square	1881–1915	24·5
Camden Road	1881–1891	24·7
Stoke Newington ..		
New River Reservoir ..	1881–1915	23·5
New River Filters ..	1900–1932	23·1
Casenove Road ..	1883–1886 1897–1899	24·5
Islington.		
Canonbury (St. Mary's Road)	1888–1895	23·9
Holloway (Manor Road) .	1881–1887	24·6

County, Riv. Division and Station.	Period.	Computed average.
Hackney.		in.
Clapton Pond	1916–1932	22·8
Upper Clapton	1883–1888	23·4
Lea Bridge	1893–1899	23·1
Clapton Common ..	1881–1893	23·6
Holborn.		
Finsbury.		
Old Street	1883–1911	23·3
City Road	1898–1906	23·7
City of London.		
Bethnal Green.		
Victoria Park	1925–1932	23·1
Stepney.		
Poplar.		
Isle of Dogs	1925–1932	21·9
Old Ford (Pumping Stn.)	1922–1932	22·9
Old Ford (Penstocks) ..	1891–1932	22·4
Woolwich.		
N. Woolwich (Pumping Station)	1906–1932	21·6
Barking Outfall	1893–1932	20·8
SURREY.		
3. THAMES—DARENT		
Lower Norwood	1881–1899	24·6
Norwood (Fox Hill Gdns.)	1898–1904	24·5
4. THAMES—WANDLE.		
Thornton Heath (Thornton Road) ..	1889–1899	23·4
Mitcham (Brook Cottage)	1918–1924	23·1
Wimbledon (Trinity Road)	1913–1932	24·0
Wimbledon (Sewage Wks.)	1927–1932	23·4
Wimbledon (Park View)	1904–1912	24·9
Wimbledon (Kingston Rd.)	1906–1921	25·4
5. THAMES—MOLE, &c.		
Surbiton (Lovelace Road)	1897–1914	24·7
New Malden (Edenfield)	1905–1919	24·2
Wimbledon (Raynes Park)	1926–1932	23·6
Raynes Park (Seed Testing Ground) ..	1911–1915	23·4
Raynes Park (C. School)	1925–1932	23·8
Wimbledon (Merton Hall Road)	1914–1922	23·7
Wimbledon (Worple Rd.)	1910–1915 1922–1932	24·0
Wimbledon (The Downs)	1901–1926	24·5
Wimbledon (Richmond House)	1894–1899	25·7
Richmond (The Terrace)	1900–1929	23·6
Richmond (The Old Palace)	1903–1916	23·9
Richmond (Kew Observatory) ..	1881–1915	23·8
Kew (Royal Botanic Gdns.)	1910–1932	23·4
Barnes (Barn Elms) ..	1923–1932	22·9

County, Riv. Division and Station.	Period.	Computed average.
KENT.		in.
5. THAMES—DARENT &c.		
Bickley (Farrants) ..	1912–1932	25·9
Bromley (The Palace) ..	1896–1920	24·9
Bromley (Sundridge Ave.)	1921–1932	24·7
Bromley (Widmore Road)	1908–1914	24·9
Bromley (Ravensfell) ..	1908–1915	24·3
Bromley (Lansdown Rd.)	1904–1916	24·3
Bromley (Rodway Road)	1907–1924	24·6
Bromley (Boro' Council)	1927–1932	24·2
Bromley Hill (Plaistow La.)	1925–1932	26·0
Beckenham	1888–1892	24·5
Beckenham (Wickham Rd.)	1899–1906	24·6
Penge (Recreation Gd.)..	1920–1932	24·6
Chislehurst (Hillside Abbey Lodge).. ..	1883–1894	24·2
Chislehurst (The Chesnuts)	1887–1892	25·0
Chislehurst (Southlaund)	1894–1900	24·3
Chislehurst (Foxbury) ..	1896–1916	24·5
Chislehurst (Scadbury Pk.)	1924–1932	24·6
Chislehurst (Holbrook La.)	1926–1932	25·1
Sydenham (Gorrevod) ..	1894–1899	24·6
Sidcup (Hatherley Road)	1890–1904	25·1
Erith (Crossness) ..	1881–1915	20·8
MIDDLESEX.		
1. THAMES—COLNE—BRENT.		
Hampton Water Works	1906–1932	22·7
Teddington (Gomer Hse.)	1881–1899	24·2
Teddington (Clarence Rd.)	1910–1914	24·4
Teddington (Holmesdale)	1925–1932	24·0
Hounslow (St. Stephen's Vic.) ..	1915–1926	23·6
Isleworth (Spring Grove)	1881–1889	23·3
Isleworth (Dunster Lodge)	1881–1886	23·3
Kew Bridge (Waterworks)	1906–1932	24·1
Chiswick (Grove Park) ..	1909–1923	23·2
Turnham Green (Sewage Works)	1911–1932	23·3
Gunnersbury Station ..	1882–1897	23·0
Acton (Newburgh Road)	1891–1907	23·9
Ealing (Castlebar Road)..	1888–1910	25·0
Ealing (St. Paul's Vic.) ..	1926–1932	24·7
Ealing (Hanger Hill Res.)	1914–1932	24·7
Perivale (Sewage Works)	1886–1932	24·0
Willesden Reservoir ..	1923–1932	25·6
Willesden Green (Strode Road)	1895–1931	25·3
Sudbury (Stn. Approach)	1921–1932	24·3
Child's Hill (Helenslea) ..	1881–1905	25·6
Golder's Green (Dunstan Road)	1923–1932	25·3
Highgate (North Hill) ..	1892–1932	25·4
Harrow (Oakhurst) ..	1920–1932	24·2
Harrow (Bessborough Rd. Depot)	1893–1932	25·8
Hendon (Hillwood) ..	1894–1900	26·2
1. THAMES—COLNE & BRENT—(continued)		
Hendon (C. School) ..	1906–1931	26·0
Wealdstone (Sewage Wks.)	1902–1932	24·9
Harrow (Wealdstone Hse.)	1927–1932	25·1
Harrow Weald (Hill Hse.)	1889–1927	25·8
Pinner (West End Lane)	1922–1927	25·3
Pinner (Hatch End) ..	1904–1913	26·5
Stanmore Observatory ..	1890–1897	26·0
Mill Hill (Tennyson Road)	1907–1911	26·2
2. THAMES—LEA.		
Finsbury Park (Endymion Terrace)	1884–1892	25·4
Highgate (Northwood Rd.)	1887–1894	25·7
Highgate (Avenue Road)	1912–1920	25·9
Crouch End (Fairfield Rd.)	1895–1899	26·2
Crouch End (Aubrey Rd.)	1895–1902	26·0
Crouch End (Barrington Road)	1908–1932	25·8
Hornsey (High Street) ..	1892–1906	25·9
Hornsey (M.W.B.) ..	1900–1932	24·9
Hornsey (Burghley Road)	1892–1897	25·9
Muswell Hill (Sewage Fm.)	1889–1932	26·1
Muswell Hill (Grand Ave.)	1904–1929	26·2
Muswell Hill (Tollington School)	1911–1914 / 1916 : / 1921–1922	25·9
Alexander Pk (Grove Ave.)	1913–1920	25·3
Bowes Park (Palmerston Road)	1922 : / 1928–1931	24·3
Finchley (East End) ..	1881–1894	26·3
Finchley (Etchingham Pk.)	1886–1918	26·3
Finchley (Victoria Park)	1907–1932	26·3
North Finchley	1899–1932	25·9
Tottenham (Drayton Rd.)	1907–1932	23·3
Palmer's Green (Broomfield Park)	1919–1932	24·7
ESSEX.		
1. THAMES—LEA.		
West Ham (Abbey Mills)	1891–1932	22·3
Leyton Sewage Works ..	1928–1932	23·0
Leytonstone (High Road)	1911–1932	24·3
Walthamstow (Ferry La.)	1895–1932	22·6
2. THAMES—RODING, &c.		
Rainham (Riverside S. Works)	1925–1932	19·3
East Ham (Central Park)	1905–1932	22·3
Dagenham Sanatorium ..	1927–1932	19·3
Barking (Burial Ground)	1894–1914	21·8
East Ham Well	1898–1932	21·6
Forest Gate (Monega Rd.)	1927–1932	22·1
Barking (Little Ilford) ..	1881–1888	21·5
Manor Park (Albury Road)	1900–1923	22·3

A SUMMARY OF SEVEN YEARS' EXPERIMENTS WITH RAIN GAUGE SHIELDS IN EXPOSED POSITIONS, 1926-1932, AT HUTTON JOHN, PENRITH.

By F. HUDLESTON, M.Inst.C.E.

Introduction. It has long been known that rain-gauges in exposed situations do not give reliable results, and yet it is in such places that accurate information is most needed by those who are responsible for collecting and distributing water to the population of their country.

Symons in his earliest *Hints to Rainfall Observers* suggested the use of turf walls, and the final conclusion we have arrived at by these protracted tests is that Symons was right in his advocacy of this kind of shelter, but that he was mistaken when he recommended that they should be six inches higher than the gauge they surrounded. The very best shelter of all the types we have tested on Kilnflatt Hill has proved to be a ten foot diameter turf wall with its crater edge horizontal and level with the rim of the gauge, its outer slope at 1 in 4 and its inner slope as nearly vertical as possible.

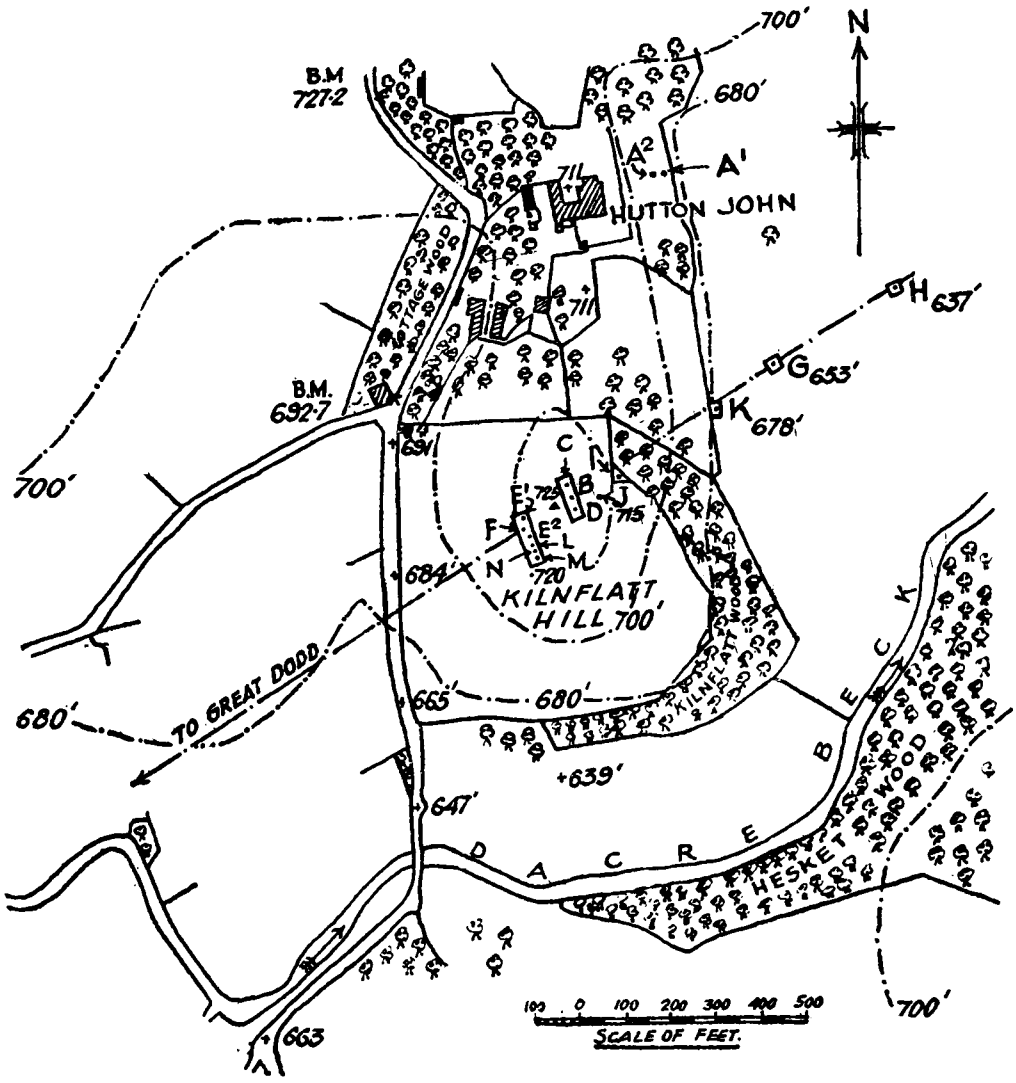
The outer slope *must* be turfed and not left stony like the top of many mountains, otherwise " insplashing " in strong winds is certain to take place and such insplashing in gales would probably occur even in a turf-walled shelter if the diameter of its crater edge were reduced to 8 feet instead of 10 (see p. 285, *British Rainfall*, 1932).

Every turf-walled enclosure should have a 2 inch or 2½ inch tile drainpipe laid through the wall at the lowest point in the enclosure, to prevent it becoming a " pond," which would induce serious " insplashing." It is quite startling to see what an excellent " dam " an old turf wall can form when a thunderstorm or any very intense shower of rain comes over it. This " ponding " trouble is a very real defect in the " pit " that Buchan recommended half a century ago, for a pit in flat ground cannot be effectually drained. In all other respects Symons's *turf wall* and Buchan's *pit* are equally effective in mitigating and indeed almost eliminating the trouble of over-exposure in rain gauges (see pp. 284-5, *British Rainfall*, 1932).

Many other kinds of shelters, other than turf walls and pits, have been proposed by different people, such as palings, stone walls, galvanised wire-netting-surrounds of various sizes of mesh opening and height, and the Nipher shield of an inverted cone, but all these devices proved to be far inferior to the turf wall in really high winds, and indeed they were occasionally even worse on Kilnflatt Hill than a " normally exposed " gauge, *i.e.* a gauge without any artificial shelter at all.

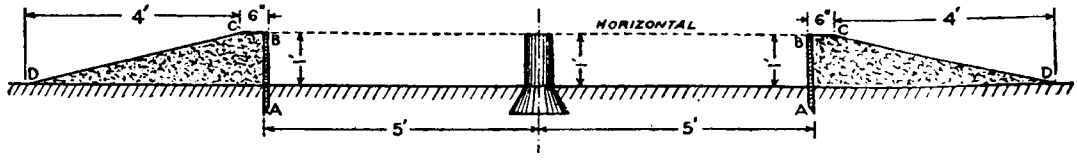
In the course of these seven years, 1926 to 1932, there have appeared in various numbers of *British Rainfall*, three photographs and eight maps, cross-sections and plans to illustrate the tests, and reference will be made below to the various articles in *British Rainfall* for elucidation of this article.

A contoured map, based on the maps in the earlier articles, is included to show the positions of the various rain-gauges on Kilnflatt Hill. Details of the exposures of the various gauges together with the dates of the modifications are set out in a table on pages 292–293 for ready reference. The article includes a diagram showing the turf wall recommended as a result of these investigations.



Map showing contours in neighbourhood of Kilnflatt Hill, and positions of Rain-gauges.

Fig. I.



SECTION OF STANDARD CIRCULAR TURF-WALL FOR RAIN-GAUGES IN WINDY SITUATIONS.

A–B MINIATURE WOODEN FENCE.
B–C LEVEL PORTION OF WALL.
C–D SLOPING PORTION OF WALL, GRADIENT 1 IN 4.

In the above drawing the ground round the gauge is assumed to be level. If it is sloping it should not be levelled but the turf-wall should be built up until its rim is everywhere on the same level as the rim of the gauge. The ground around the gauge should be drained by inserting a $2\frac{1}{2}''$ pipe through the base of the wall. On sloping ground the pipe should emerge at the lowest point of the outer circumference of the wall.

FIG. II.

Site and Equipment. In order to conduct comparative tests of rain-gauges, the first desideratum is a testing ground which supplies sites for exposure and for comparative shelter so near to each other as to make it possible for the observer to take his readings at as nearly as possible the same instant of time. Such a testing ground was supplied by Kilnflatt Hill, which had the additional advantage of being near a house where the observer could live all the year round. He could therefore take his readings at any hour in any kind of weather, and could get home in a few minutes if he had got wet through and needed a change of clothes or had got so chilled that he could not for the moment carry on with his observations. These advantages cannot well be obtained on the top of a mountain or in the middle of a moor save at enormous expense, but the exposure of Kilnflatt Hill from west-south-west, as can be seen in the photo opposite page 286 of *British Rainfall*, 1926, is not far short of that which obtains in the wildest part of any average hill country.

The Meteorological Office lent me, to start with, five of their "standard" 5-inch rain-gauges and more of them as time went on, until I had at one time to observe 10 of these gauges as well as my own 5-inch Snowdon standard gauge. The latter is placed in the gardens of Hutton John in the exact spot occupied for over 40 years by this Snowdon and by the British Association 5-inch gauge which preceded it. The catches of this gauge were used throughout the experiments as the "check gauge" for comparison of results, as it has reasonable exposure from all sides, and its records with those of the earlier gauge have been used by the Meteorological Office in drawing the isohyetal lines on their maps. The rim of every gauge I tested was exactly 12 inches above the ground.

Kilnflatt Hill is a long hog-back (what geologists nowadays term "drumlinoid" shape), its western slope is 1 in 8; its axis lies

from N. by W. to S. by E. and its summit 725.6 feet above sea-level. The eastern slope, which is much the same as the western one, has upon it, some 60 yards east of the summit, a long narrow wood that was planted a century ago on purpose to shelter the park from westerly gales. This wood has helped me in these experiments, since it prevented winds from the eastern half of the compass introducing complications during the time a gale might be veering from S.E. to S.S.W. Winds from this particular quarter would have approached my " test gauges " from entirely changed conditions of slope, and therefore would have confused me in my comparisons of their catches, for what we wanted was high winds at right angles to the axis of the hill. The map, Fig. 1, and the cross-sections in *British Rainfall*, 1926, 1928 and 1929 illustrate the shape and surroundings of the hill.

Half a mile north of Kilnflatt Hill lies a long ridge of high ground that runs east and west and is 865 to 900 ft. above sea-level. This ridge shelters the hill and the immediate land round Hutton John from any wind between north-west and east, thus we were well laid out for the winds we wanted, *i.e.* gales from west-south-west.

The gauges used for the exposure tests were placed in two enclosures and surrounded by a three-wire fence to prevent cattle getting at them, while allowing sheep to get in and keep the grass short. These gauges are indicated upon the maps just referred to and also by the plans on pages 264-5 of *British Rainfall*, 1930. They were placed so that the western enclosure was on the exposed western slope of the hill, while the eastern enclosure was just east of the summit. Both enclosures were on a line from Kilnflatt Hill to Great Dodd, 2,807 ft. above sea-level and 33° south of west from Kilnflatt Hill. This is the line of our greatest exposure (see the photograph in *British Rainfall*, 1926).

The eastern enclosure, 30 yards by 12 yards, had three rain-gauges lettered B, C and D set up at 11 yards from the absolute summit of the hill and in a line parallel to its axis, so that they were all under the same conditions when a westerly gale was at its worst. The ground where the three gauges were fixed is just 1 foot lower than the summit of the hill, so that their rims were exactly at the same level as the top of the ground to windward of them. The centre gauge of the three was lettered B, while C was 8 yards north and D was 8 yards south of B. Gauge B was kept normally exposed for the whole seven years while the other two had various shelters from time to time.

The western enclosure, also parallel to the axis of the hill, was originally 22 yards long by 12 yards wide, but eventually extended to 40 yards by 12 yards. It had at first only two gauges, E, and F, then three gauges lettered E_1, E_2 and F and ultimately six gauges, E_1, E_2, F, L, M and N. All the gauges were in line from north by west to south

by east, except that F was slightly in advance of E_1 and E_2 so that it might not be affected by their turf walls. This enclosure was set up so that the first two gauges were 29 yards west of the summit and at the very spot where the 1 in 8 slope was merging into the rounded top of the hill. The ground level at the gauges was about 722 ft. above sea-level, *i.e.* about $3\frac{1}{2}$ ft. lower than the hill top. When this enclosure was lengthened to 40 yards in December, 1930, the extra 18 yards were added to its southern end and this brought the last 2 gauges, M and N, somewhat onto the southern slope of the hill and to a rather lower level, as can be seen in the plan at p. 264, *British Rainfall*, 1930. This did not, however, much affect their exposure on the line towards Great Dodd. One of the gauges, F, has been kept normally exposed since February 1927, *i.e.* for $6\frac{3}{4}$ years, for the express purpose of comparison with the various types of sheltering devices round its five companions in adversity, because the first three months of these experiments had given us some idea of the complexity of the problems we had determined to solve.

Methods employed in taking Observations. The catches were observed every day between 9 h. and 10 h. beginning with gauge A and when, as frequently happened if it was raining at this hour, I found that A had caught an appreciable quantity of precipitation during the time occupied by my round, I used to go round again when it faired up so that my comparisons should be true. Occasionally, and especially after I had ten testing gauges to observe in rough winters, it took two or three days before I got a final absolute comparison for the whole lot, but of course I could always compare two or three neighbouring gauges in the wildest variations of weather and thus I soon learnt what to look for, or be prepared against.

The readings of every catch were taken to three places of decimals, for I soon found out the need for this refinement when a catch was small, and then transferred into its percentage of the catch of gauge A, the Snowdon gauge in the garden. This gauge lies 150 yards north of the line from Kilnflatt Hill to Great Dodd and consequently it does not always have precisely the same part of a rain cloud travelling over it. This is the obvious reason why it often happens in my tables of comparisons that the same strength and direction of wind frequently gives quite a different sequence of percentages of A for the catches of the experimental gauges. If, however, these percentages of A are compared with each other you will find that the " test gauges " are as a rule singularly regular in their relative comparison, as indeed they ought to be if the observer has played the game as he always attempted to do. My very first day at the job in November, 1926, showed me that it was impossible in this exposed hill-top to pour the catch out of a copper container into the glass measure without spilling part of it. I therefore put ordinary whisky bottles into every copper container, where they fitted exactly. They proved to be almost as

handy as the one pint glass bottles which the Meteorological Office nowadays sends out with their standard 5-inch gauge, when supplied for daily observation.

Experiments with palisades, wrought iron fences, hurdles, wire-netting-surrounds and turf walls. The first set of experiments was devised to compare the sheltering qualification of turf walls and galvanised wire netting. Gauges D and F were surrounded by a circular wooden paling of 10 ft. diameter and 1 ft. 6 inch above ground, intended to be a rough imitation of Symons's turf wall. Gauges C and E had a 6 ft. square enclosure of one inch mesh galvanised wire netting, 2 ft. 6 inches high, to form a type of shelter which at that time was often advocated as efficient against high winds. But both devices were proved by 16th February, 1927, to be definitely inferior to the bare gauge B, inasmuch that they induced far worse eddies round the gauges they enclosed than were the eddies round a normally exposed gauge. This peculiarity was very plainly illustrated by placing floss silk streamers on little bamboo rods in many positions round the gauges and at various heights above ground level (p. 289, *British Rainfall*, 1926). This failure of the vertical paling is instructive as it proved that any upright block, such as a wall or a large mass of stone, like those frequently found in a hill country, induces such disturbance in the stream lines of wind as entirely to upset the catching capabilities of a rain gauge under its lee. In all probability this accounts for the inconclusive results obtained some 50 years ago by Dr. Wild at St. Petersburg with an open-topped enclosure round a rain-gauge. The photographs opposite page 287, *British Rainfall*, 1926, illustrate these two devices and the results obtained are fully described there.

In February 1927, the paling round D was driven a further three inches into the ground and used as a core for a turf wall 10 ft. diameter, 15 inches high, with an outer slope of 1 in 3 and an inner face of turf which was almost vertical. The crater edge of this surrounding turf wall was made parallel to the ground, which here sloped about three inches toward the east in the 10 feet, and it was kept like this for $6\frac{3}{4}$ years, *i.e.* up to the day these experiments came to an end.

Many other designs of turf walls were tested during this long period, yet D's turf wall proved to be as good as any of them, except the final design round gauge C. It was found that the extra three inches of D's wall over that of C had slightly diminished its catching capacity in gales. It is shown later that any raising of a turf-wall *above* the plane of a gauge rim had a tendency to lift rain drops above it if the site was very much exposed. The first turf-wall round C had been level with C's gauge rim for 12 months in 1928–29, during which period C's catches were the same as those of D. Our final judgment was that as the extra three inches of D's wall had not improved D's catches over those of C, at either of the periods when C's wall was

level with the gauge rim, and since the added 2 inches to the wall of E_1 in 1930–31 had *reduced* the catches of that gauge, a turf wall which was level with the rim of the gauge it surrounded was the best height for general use in all exposed situations.

At the same date, February 1927, gauge C in the eastern enclosure had its wire-netting-surround lowered to 1 ft. 6 inches above ground and it remained thus until March, 1928. The removal of the top 12 inches of netting improved the catch of gauge C, and for the 12 months of trial its catch was about the same as that of the bare gauge B in every kind of weather, *i.e.* this wire netting shelter was no better than nothing at all. This conclusion was confirmed by the experiments of the Meteorological Office staff at Lympne.* The netting round C was removed in April 1928.

In February, 1927, we also altered the surroundings of the two gauges E and F in the exposed western enclosure. The paling round F was pulled up and from this date to the end of the experiments the gauge F was kept normally exposed (*i.e.* bare) for the express purpose of comparison with all the other sheltering devices we might try upon the exposed hillside. The wire netting round E was entirely removed. Its place was taken by four wrought iron hurdles, 6 ft. long and 3 ft. 4 in. high, for the purpose of testing a method frequently adopted on moors and open gathering ground in order to protect the rather frail rain-gauge from damage by cattle, ponies and other mischievous animals. But twelve months' test proved that the bars of these hurdles increased the eddies of wind round the gauge and reduced its catch definitely below that of the bare gauge F in all weather. The catch was as much as 4 per cent. lower in the rough days of winter, and in April, 1928, the hurdles were finally removed. I may remark here that the three-wire fence round the enclosures on Kilnflatt Hill had no appreciable effect on any of the test gauges.

Further experiments with turf walls of varying dimensions. By this time, *i.e.* April, 1928, we had tested four distinct classes of sheltering devices, viz. palisades, wrought iron hurdles, wire-netting-surrounds of varying heights as well as a turf wall. Since the Meteorological Office experiments at Lympne and Holyhead had also shown that the turf wall there was of definite value in mitigating the evil effects of exposure to high winds, I proceeded, with the approval of the Meteorological Office authorities, to surround three more gauges with turf walls in the following manner :—Gauge C in the eastern enclosure was surrounded by a turf wall 10 ft. in diameter and 12 inches high, with its crater edge parallel to the ground, like that of gauge D ; gauge E_1 on the 1 in 8 slope of the western enclosure had a turf wall 10 ft. in diameter, with its crater edge exactly horizontal and in the same plane as the rim of the gauge. A new gauge, called E_2, was installed

* "Experiments on the Shielding of Rain-gauges at Lympne Aerodrome," J. Glasspoole, *British Rainfall*, 1930 (pp. 272–279).

in the western enclosure 12 yards south of E_1 and a 10 ft. diameter turf wall, 12 inches high, put round it, with its crater edge exactly parallel to the ground surface but in the same plane as the rim of the gauge. Since the surface of the ground here was merging into the rounded top of the hill the result was that the windward edge of its crater was 4½ inches *below* the level of the gauge rim while the leeward edge was 4½ inches *above* that level. Hence the windward edge of *this* crater was 9 inches lower than the leeward edge. Thus we now had under test four different patterns of turf walls, *i.e.* two in each enclosure, and each enclosure had also a normally exposed gauge for comparison with its two turf-walled gauges.

Six months later in the same year, 1928, we installed another gauge called J to leeward of the two enclosures and 50 yards east of the summit of the hill where the ground was 10½ ft. below the level of the hill top, in order to test our suspicion that high winds were carrying raindrops over the top of the hill and this suspicion was confirmed definitely by the five years' records up to 1933.

The twelve months between 1st May, 1928, and 30th April, 1929, gave the following results.

TABLE I.—*Comparison of results 1st May 1928 to 30th April, 1929.*

	No. of days.		Western Enclosure			Eastern Enclosure				
		A	E_1	E_2	F	B	C	D	J	
		in.	in.	in.	in.	in.	in.	in.	in.	
(a) High Westerly Winds	18	7·18 *100*	5·88 *82*	5·74 *80*	5·35 *74*	6·94 *97*	7·05 *98*	7·04 *98*	7·33 *102*	*above* 25 m.p.h.
(b) Strong Westerly Winds	14	7·20 *100*	6·56 *91*	6·36 *88*	6·16 *85*	7·12 *99*	7·30 *101*	7·35 *102*	—	*below* 25 m.p.h.
(c) Sleet and Snow	3	0·49 *100*	0·66 *135*	0·65 *133*	0·48 *98*	0·43 *88*	0·60 *122*	0·63 *130*	0·35 *72*	
(d) All other days	153	29·85 *100*	29·77 *100*	29·78 *100*	28·74 *97*	30·18 *101*	30·78 *103*	30·73 *103*	— —	Wind not more than Force 3.
(e) Totals for 12 months ..	188	44·72 *100*	42·87 *96*	42·53 *95*	40·93 *92*	44·67 *100*	45·71 *102*	45·75 *102*	—	

NOTE.—The italics give the percentage of A's catches.

This table is extracted from the large table at page 260 of *British Rainfall*, 1928. It will be seen from line (d) that during the 153 rain-days, when the wind was never more than Force 3 of Beaufort's scale, there is no perceptible difference in the catching capacity of each pair of turf-walled gauges in the two enclosures, while each pair is between 2 and 3 per cent. above the catch of their neighbouring *bare* gauge. The gauges in the eastern enclosure, however, have caught more precipitation than those in the western one.

Line (b), where I have collected the catches of all westerly winds above Force 3 but less than 25 m.p.h. shows by its percentages that the eastern group of gauges are getting very much ahead of the exposed western ones in these 14 days. Line (a), with 18 days of really high winds, accentuates this effect, and we find the bare gauge F has caught no more than 75 per cent. of that collected by the bare gauge B, although the two gauges are only 40 yards apart. But the turf-walled E_1 has caught nearly 84 per cent. of what the turf-walled C and D have collected, thus showing plainly the advantage of turf walls in counteracting the effects of great exposure to wind when rain is falling.

The line (c) shows equally plainly a peculiarity of turf walls, which became much more obvious in later winters, in that they will persist in catching more than their fair share of snowflakes blown across them. The very first time I had snow falling on a turf-walled gauge with a breeze of wind, I was surprised to observe the very marked habit of snowflakes to float along above the turf walls fairly parallel to the ground, unless they were near the level of the edge of the crater when they immediately lost their forward travel and fluttered down almost vertically to the bottom of the turf walled enclosure. In this particular instance of line (c) the excess catch of the turf walls is about 30 per cent. greater than those of the bare gauges B and F, but as will be seen later, when we come to consider the case of 20th March, 1930, this excess catching capacity of a turf-walled gauge *may* become a serious source of confusion. Fortunately, however, a turf wall cannot continue to play this trick upon the gauge it surrounds *after* the snowfall has been heavy enough to fill up the enclosure and bury the gauge it contains.

When once a rain-gauge is buried by snow it seems to carry out its duties properly, as was indicated on 24th to 26th February, 1933, and is fully described at p. 282–4 of *British Rainfall*, 1932.

If we now consider line (e) of Table 1 we see at once that it is the 35 days of rough weather of lines (a), (b) and (c) that have over-ridden the relative uniformity of line (d), and given the extraordinary differences in a year's catch of six identical gauges within 40 or 50 yards of each other, but with devices designed to mitigate turbulence round them.

We can now proceed to examine Table II, where I have collected the catches of high westerly winds in each of the five winters between October, 1928, and April, 1933. I propose to discuss first the results of the changes in the shape of turf walls round C and D, *i.e.* the pair in the eastern enclosure just to the leeward of the hill top.

Line No. 1 of Table II is the same as line (a) of Table I. The turf walls of C and D give the same catches, although C's wall is only 12 inches high, whereas D's wall is 15 inches high and both crater edges have the same slope as the ground, *i.e.* 3 inches in 10 ft. I then

TABLE II.—*A comparison of the catches of the Turf-walled Gauges on Kilnflatt Hill during "High" westerly winds of 25–45 m.p.h. for five consecutive years.*

Reference to former article.	No. of days.	Check guage	Western Enclosure			Eastern Enclosure			Close to the Wood	Period
		A	E_1	E_2	F	B	C	D	J	
		in.	in.	in.	in.	in.	in.	in.	in.	
(1) Line (K) of page 291 B.R. 1929	18	7·18 *100*	5·88 *82*	5·74 *80*	5·35 *74*	6·94 *97*	7·05 *98*	7·04 *98*	7·33 *102*	Winter of 1928–9
(2) Line (C) of page 291 B.R. 1929	16	7·19 *100*	5·61 *78*	5·44 *75*	5·18 *72*	6·79 *95*	6·56 *91*[1]	6·97 *97*	7·31 *102*	Winter of 1929–30
(3) Line (e) of page 267 B.R. 1930	7	3·71 *100*	2·60 *70*[2]	2·76 *74*	2·33 *63*	3·38 *91*	3·68 *99*	3·51 *95*	3·88 *105*	Winter of 1930–31.
(4) Line (d) of page 283 B.R. 1931	7¾	3·58 *100*	2·82 *79*	2·72 *76*[3]	2·38 *66*	3·47 *97*	3·60 *101*	3·57 *100*	3·78 *106*	Winter of 1931–32.
(5) Line (c) of page 286 B.R. 1932	12½	5·37 *100*	4·26 *79*	4·23 *79*	3·86 *72*	5·10 *95*	5 16 *96*	5·21 *7*	5·57 *104*	Winter of 1932–33.
		NOTABLE GALES FROM W.S.W								
(6) 28 Nov. 1928 (p. 267, B.R. 1928		1·15 *100*	0·75 *66*	0·72 *63*	0·67 *59*	1·09 *95*	1·10 *96*	1·07 *93*[4]	1·24 *108*	Whole gale from S.W. to W.
(7) 29 Dec. 1929 (p. 292, B.R. 1929)		0·22 *100*	0·15 *70*	0·14 *66*	0·14 *64*	0·20 *91*	0·18 *83*[1]	0·20 *93*	0·24 *108*	Whole gale from S.W. to W.
(8) 15 Jan. 1931 (p. 269, B.R. 1930)		0·16 *100*	0·09 *57*[2]	0·11 *68*	0·07 *41*	0·14 *88*	0·15 *94*	0·15 *94*	0·17 *107*	Whole gale from S.W. to W.

NOTE.—The italics give the percentages of A's catch.

[1] During the winter 1929–30 the crater edge of the turf wall round Gauge C was 6 inches *above* the level of the gauge rim.

[2] During the winter 1930–31 the crater edge of the turf wall round Gauge E_1 was 2 inches *above* the level of the gauge rim.

[3] During the winters 1931–32 and 1932–33, the crater edge of the turf wall round Gauge E_2 was raised 2½ inches all round, *i.e.* it was still parallel to the ground surface.

[4] This low catch for D is probably merely "error," as is pointed out at page 267, *British Rainfall*, 1928.

raised C's wall in October, 1929, until its crater edge was 6 inches above the gauge rim and made the edge of its crater horizontal; thus making it exactly similar to what Symons recommended many years ago. The result (line 2) was to reduce C's catch to only 96 per cent. of the catch of the bare gauge B, which was decidedly unexpected. The higher wall had oversheltered gauge C from gales, giving only 94 per cent. of D, whereas in the previous winter the catch of C had equalled that of D.

The radius of all my turf walls in these experiments has been five feet, so that the altitude of C's windward crater edge from C's rim was 5° 43′. Now Little Mell Fell, which is 2 miles S.W. by S. of Kilnflatt Hill, has just 5° altitude to it and we never found the wind vane on Kilnflatt Hill pointing directly to the summit of Little Mell Fell in *any* wind of gale force. At Hutton John there is always a sudden rapid shift of wind in *gales* from S. by W. to S.W. by W., and this I submit means that the 5° altitude of Little Mell Fell can lift a

wind of 35–50 m.p.h. over our heads when that wind is round about S.W. by S. and consequently we get the apparent quick shift from S. by W. to S.W. by W. It would seem therefore that the 6 inches of height added to C's wall in October, 1929, must have lifted the stream lines of the wind in a gale, so that they carried many small drops of rain beyond the rim of the gauge and thereby reduced its catching capacity, although they might fall in the leeward half of the crater.

In November, 1930, I lowered C's wall by four inches, *i.e.* made it only 1 ft. 2 in. high, keeping it truly horizontal. The surplus soil was used to flatten its outer slope to 1 in 4 as against the 1 in 3 of all my other turf walls, and it was kept thus until October, 1933, when I ended the experiments. The effect of this modification is clearly shown in line 3 of Table II when gauge C is 4 per cent better than D, 8 per cent. better than B, and only 1 per cent. below the check gauge A in the seven days of high winds during the winter 1930–31. This winter had the strongest winds of any of the five years. It gave all the gauges from B to F their lowest ratios of A and it also enabled J, the gauge on the leeward slope of Kilnflatt Hill, to catch 10 per cent. more than D for the seven very stormy days in 1930–31, which is the greatest excess of any of the five winter summaries in lines (1) to (5) of Table II.

Thus we have now got a form of turf wall which has practically eliminated the disturbing effect of great over-exposure on the top of Kilnflatt Hill even when gales are blowing across it. The records of lines 4, 5 and 6 do not show the same degree of superiority of C's latest wall over D's, but the three winters taken together and also several individual observations justify the final judgment that is laid down at the commencement of this article.

If we now examine the records of the two turf-walled gauges on the hill side, we find that E_1, with its crater edge horizontal and in the actual plane of the rim of the gauge, is above E_2 in the four lines 1, 2, 4 and 5. When I raised its crater by 2 inches for the winter 1930–31 (line 3 of Table II) it fell back by 4 per cent. below E_2, which seems to imply the same lifting of streamlines of wind that I have referred to above, in the case of C, when that gauge's wall was lifted by 6 inches. It will be noted that E_1 regained its former superiority over E_2 as soon as this extra 2 inches was removed, thereby confirming the conclusion arrived at in the last paragraph.

The weak point with gauge E_2 as compared with E_1 seems to be due to increased turbulence inside its turf-walled enclosure caused apparently by the fact that its leeward crater edge is 9 inches higher than the windward edge and might tend to baffle the wind in a gale. I always found more indication of turbulence here than inside the enclosure round E_1 whenever I tested them with floss silk streamers. The whole question of horizontal versus sloping crests to turf walls will be found discussed at some length in pp. 267–8, *British Rainfall*,

1928; pp. 269–70, *British Rainfall*, 1929; and pp. 279–80, *British Rainfall*, 1930, and it clearly points, in my view, to the advantage of the horizontal crater edge.

Experiments concerned with small drops of rain on the leeward side of Kilnflatt Hill. During the first two winters of these experiments we were puzzled over the failure of our gauges on the hill side to catch rain in high winds. Accordingly, in November, 1928, we put gauge J on the leeward slope of Kilnflatt Hill and on the line of Great Dodd at 50 yards' distance from the summit where the ground level was only 715 feet, *i.e.* 10½ feet lower than the hill top. The catches of this gauge, which are given in Table II for all the westerly gales and high winds of five consecutive winters, prove that very much precipitation is transported *over* the hill top and deposited on its leeward slopes in every wind, which is turbulent enough to dash raindrops together and break them up so that they form the misty appearance that one always sees in rain showers during gales.

We know (see pp. xiii–xv, *British Rainfall*, 1925) that small drops of water take a much longer time than large drops to fall through the air. When a gale breaks up large raindrops, and so forms the misty appearance referred to, it is obvious that the resulting particles will be carried along by the wind for distances that will be proportionate in some degree to their masses, and to the velocity of the wind that is transporting them, and this velocity is always intensified upon the windward slope of a hill. When the raindrops travel beyond the crest of a hill, especially that of a long "hog-back" like Kilnflatt Hill, they get into comparatively calm weather, where they will not travel far before they fall to earth. Consequently, I submit, we are bound to get an increased fall of rain, such as gauge J persisted in catching in every westerly gale for the five years it was functioning.

If we turn to Table II we find that J's catches are in excess of those of D (the only one of the turf-walled gauges that had exactly the same turf wall round it for the whole time), by amounts which vary from 4 per cent. in 1928–29 to 10 per cent. in 1930–31. In the gale of 29th December, 1929, it exceeded D by as much as 15 per cent., and when we compare J with E_1 we find an excess of 20 per cent. for the winter of 1928–29, of 31 per cent. (for E_2) in 1930–31 and the extraordinary excess of 42 per cent. in the gale of 28th November, 1928.

As I have already said in the earlier part of this article we do not seem ever to have succeeded in catching the true rainfall during gales with our gauges on the hillside. The comparison of J with E_1 or E_2 is not therefore deserving of so much consideration as is that between J and D, but it does add weight to the argument that gales always do carry a considerable proportion of their rain over the crest of a hill.

I have discussed this behaviour of gauge J at length in former articles, viz. pp. 268–9, *British Rainfall*, 1928; pp. 292–3, *British*

Rainfall, 1929; pp. 269–70, *British Rainfall*, 1930; and again in pp. 278–9, *British Rainfall*, 1931, where I showed how J failed to catch any excess of precipitation over the others in a *southerly* gale, since it was then on the *flank* of Kilnflatt Hill and not under its lee as it was with westerly gales.

In the summer of 1926 the Bavarian Forest Research Department carried out an elaborate investigation into meteorological conditions on the Hohenkarpfen Hill in eastern Würtemberg, when they could not detect any tendency towards increased rainfall upon the leeward side of that hill above the average catch of the numerous gauges they had installed all round it. From the summary of their report, which was given in the *Meteorological Magazine* for May 1929, it would seem that they did not experience a wind velocity in excess of 5 m/s, *i.e.* $11\frac{1}{4}$ m.p.h., whereas my Table II deals with wind up to 45 m.p.h. and perhaps more. As can be seen in any of the Tables accompanying my report in the numbers of *British Rainfall* from 1929 to 1932, the gauge J on Kilnflatt Hill did *not* show any tendency to excess *catch* in summer months save once in June 1929. On this occasion continuous drizzling rain with a westerly wind of 12 m.p.h. gave J a total catch of 0·27 in. for 24 hours which was 4 per cent. above B, C or D, 12 per cent. above E_1 and E_2, and as much as 16 per cent. above the catch of gauge F, the bare gauge on the hillside (p. 269, *British Rainfall*, 1928). It is of course obvious that gauge J was always in comparatively calm conditions during a gale, since it was $10\frac{1}{2}$ ft. below the top of the hill. On the other hand gauges E_1, E_2 and F were exposed to a degree which perhaps no man except myself (the observer) can possibly appreciate, but even the critic, who reads this article in an armchair by his fireside, must admit that when J catches 8 per cent. more than A (the check gauge) it is plain that J has been more favoured by luck than it has a right to expect *if* a high wind is not able to transport drops of rain over a hill. Still, it is scarcely believable that the actual rainfall on the windward slope of Kilnflatt Hill can truly be as low as the catches of E_1 would imply. We are still in the dark, however, as to the precise difference in rainfall between the windward and the leeward sides of a hill. This is not of much concern to the waterworks engineer, since what he has "lost on the swings" he must have "gained on the roundabouts."

Experiments with gauges at varying distances from a wood. For two years (April, 1928, to November, 1930) we had three of the Meteorological Office gauges functioning in the park at Hutton John upon the lee-side of Kilnflatt Wood. These sites were selected so as to give ratios of height of trees to distance from the trees of 1 to 1 (Gauge K); 1 to 2 (Gauge G), and 1 to 4 (Gauge H). The results will be found in detail in *British Rainfall*, 1928 and 1929, but are summarised here. G and K were normally exposed for the whole period, but H was normally exposed the first year and had a turf wall round it for the second year.

Gauge K with its 1 to 1 ratio was quite upset with every wind above force 3 from the west, by the sheltering of the wood and in the gale of 29th December, 1929 (p. 296, *British Rainfall*, 1929), it only got 28 per cent. of the catch of the check gauge A. Occasionally and especially during thunderstorms its catch exceeded that of every one of the other ten gauges, due no doubt to splashing off the leaves of the trees near it, which were beeches with smooth leaves.

Gauge G with its ratio of 1 to 2 for *height to distance* always had very nearly the same as the check gauge A in westerly winds and gales, and therefore confirmed the old-established rule that a gauge should be situated at a distance from any woods or buildings of twice the height of that object.

Gauge H, with its ratio of 1 to 4 for *height to distance*, gave a catch equal to G and A in most winds. When, however, a westerly gale visited us it invariably dropped behind so long as it was a *bare* gauge, *i.e.* normally exposed (see p. 260, *British Rainfall*, 1928). After I put a turf wall of 12 inches in height round it in October, 1929, its catch for *rain* was practically identical with that of A and G in all winds, although when *snow* was falling the turf wall played its customary game and increased the catch to some extent (see *British Rainfall*, 1929). It may then be fairly concluded that a ratio of 1 to 4 for *height to distance* is *not* advisable in the case of a bare gauge, since turbulence can then be developed to a much greater degree than if the ratio height to distance is kept at 1 to 2.

I submit also that this test of gauge H *with* a turf wall is good proof that *every gauge* in the gathering ground of a reservoir ought to have a turf wall round it, since every gathering ground must be exposed to high winds.

Observations during snow. Whenever precipitation takes the form of *snow* every kind of rain-gauge, whether it be bare or sheltered by artificial means, becomes utterly unreliable. If 5 inches of snow happens to fall during a flat calm, which is hardly ever the case, a modern rain-gauge of the Snowdon type will catch the proper amount, whether it be of normal exposure or surrounded by a turf wall. If a wind gets up, we have to deal with floating snow-flakes and in this case the degree of exposure seems to be the only factor that determines the *catch* you will find in your gauge. During the seven years of these experiments I have had one or two days with snow when all the gauges had much the same catch, but as a general rule they differed very much. On 20th March, 1930 (pp. 295–8, *British Rainfall*, 1929), when we had about 16 inches of freshly fallen snow everywhere round Kilnflatt Hill, a strong westerly wind sprang up and drifted this snow for about 4 hours. Subsequently a wet sleet came on, which gave a covering of ice on the snow and stopped the drifting. The extraordinary catches set out below were obtained. The wind was west by north and of Force 4–5 on the Beaufort scale.

		Western Enclosure			Eastern Enclosure				Wind
	A	E_1	E_2	F	B	C	D	J	
	in.	in.	in.	in.	in.	in.	in.	in.	
Catch of 20th March, 1930	0·20	1·30	1·28	0·13	0·22	0·88	1·69	0·28	W. by N. Force 4–5
%	*100*	*650*	*640*	*65*	*110*	*440*	*840*	*140*	

It will be seen that the catches of the four normally exposed gauges, A, F, B and J, are somewhat in proportion to their relative exposures, but are of quite a different *order* from those of the four turf-walled gauges. E_1 and E_2 have each caught *ten times* as much as their neighbour F, while C and D, which are only 16 yards apart, are respectively 4 times and 8 times as great as their neighbour B. Now the difference between C and D is probably due to the direction of the wind, which would find C more influenced than D by the sheltering woods of the house (see the maps in *British Rainfall*, 1926, 1928 and 1929). E_1 and E_2 have identical degrees of exposure and they have almost identical quantities of catch. Yet I cannot believe that the true precipitation on 20th March, 1930, was even as much as 0·10 inches, whatever the 8 gauges may have affirmed.

It is obvious that the extraordinary degree of catching capacity for snow-flakes, which the turf-walled gauges exhibited on this occasion, was due to the fact that since they are made of copper and the earth temperature on this occasion was well above 32°F. they were able to thaw the drifted snow-flakes almost as fast as they fell into their funnels. The 1·69 inches of water which I found in D would represent about 20 inches of *snow*, whereas the deep Snowdon funnel of a Meteorological Office gauge could not hold more than 5 inches of unmelted snow. In this article we have here definite proof that a turf-walled enclosure will keep on catching drifting snow-flakes whether they come from the sky *or* the earth until it is filled up. This means that it will give exaggerated evidence at every snowstorm.

Three years later a heavy fall of snow on 24–26th February, 1933 (see pp. 232–4, *British Rainfall*, 1932), which averaged fully two feet dee pall round this part of the Lake District, taught us another lesson, *viz.* that after a rain-gauge is completely buried by snow it will catch approximately its proper share of the melted water in the superincumbent snow as the thaw comes on. During the interval of time between the commencement of a snow-storm and the moment when a gauge gets completely buried, its record for *catch* is hopelessly small if it happens to be normally exposed, and hopelessly large if it happens to be within a turf-walled enclosure. The only sound procedure, so far as I can see, is to take a "cheese" of the snow off the ground at some place where it seems to be of average depth and melt it at your leisure.

A still further complication with snow, at any rate in this part of England, is that a heavy fall is largely dissipated by evaporation

rather than by melting, and therefore has little effect on the streams and rivers round it when a snowstorm is followed by dry weather. If a fall of warm *rain* succeeds the fall of *snow* it will thaw the snow rapidly and probably result in big floods. The waterworks engineer will however know how much water has flowed into his reservoirs and consequently can dispense with the " fairy tales " his rain-gauges proffer to him on the rather rare occasions when his gathering ground happens to get covered with thick snow.

Comparison of the catches of gauges with a Nipher shield, in pits or on level benches with gauges surrounded by turf walls. It is now fifty years since the Nipher shield (an inverted cone surrounding a rain-gauge) was devised. For some time this device was considered a reliable shelter in snow, but it gradually fell into disrepute after the Meteorological Office tested one at Eskdalemuir in 1921. We tested it round a gauge here (N) in the western enclosure against 5 other types. The results proved that it developed turbulence of a peculiar degree, which made it no more reliable in rain storms and very little less untrustworthy in snow than a bare (normally exposed) rain-gauge ; the test is discussed at length in *British Rainfall,* 1930.

In November, 1930, we removed the three rain-gauges in the park which, as described earlier in this article, had been established to test the sheltering effect of plantations. I put them in an extension of the enclosure on the slope of Kilnflatt Hill, for the express purpose of testing the relative values of pits, level benches on a hillside, the Nipher shield, and lastly of the old-fashioned shallow funnel gauge as compared with the Snowdon pattern with the deep funnel that has now entirely supplanted the earlier type. The extension of this enclosure put the three gauges somewhat on the flank of Kilnflatt Hill and therefore slightly altered the direction, but not the degree of exposure to high winds, as will be seen on pages 264–5 of *British Rainfall,* 1930. We then entered into the final comparative tests of the various artificial shelters which seemed to be most efficient in over-exposed positions.

Gauge L was placed in the centre of a pit such as Buchan had recommended 50 years ago ; it was made 8 ft. in diameter and the inner faces of the pit were sloped at 1 in 3, and turfed. The three winters' testing of this pit proved that it was quite as accurate as our best turf wall in its records of catch. It caught and retained, however, the rain which fell into its hollow to such a degree as to form a pool of water in a few hours and develop " insplashing." In a few weeks I had to insert a $2\frac{1}{2}$ inch drainpipe in order to empty this unwanted " reservoir." For the rest of the three winters gauge L had a catching capacity that was practically identical with that of gauge E_1 for every gale that visited us during the period when E_1 had its crater edge exactly in the plane of its rim. On the few occasions when we experienced wind of Force 8 on Beaufort's scale I found L's catch a little more than that of E_1, but I attribute this apparent superiority

to "insplashing" off the ground, since L's pit was but 8 ft. diameter against E_1's turf wall of 10 ft. diameter. Later on, when in 1931–32 I had gauge M inside a pit of 11 ft. diameter, I found it had a lower catch than either L or E_1, indicating that I had enlarged the pit beyond its most efficient size as a sheltering device.

Now although it is easy to drain a pit effectually on a hillside it is not so on a level plain, and a *pit* on flat ground would be certainly converted into a *pond* at every big fall of rain and the gauge rendered useless. Consequently I am of opinion that pits should *never* be installed in any exposed or remote situation, such as the gathering ground of a reservoir.

It had become obvious during the progress of these experiments that a level bench on a hillside had less turbulence over it than the sloping ground round it, and therefore I levelled part of the southern end of this extended enclosure as shown in the plans and diagrams in *British Rainfall*, 1930. The catch of gauge M on this bench was distinctly improved over the catch of F, which was on the 1 in 8 slope, but it was a long way behind L or E_1. In October, 1931, I replaced most of the excavated soil and converted the bench into a pit of 11 ft. diameter. The records in *British Rainfall*, 1931, show that M's catches were much improved when it was in this pit, but as they were still always below those of L in a high wind it is fairly obvious that an 11 ft. diameter pit is too large to shelter a gauge satisfactorily. Any size of pit and, inferentially, any hollow or depression which would not "pond up" rain is, however, better than a flat surface.

Experiments with a British Association gauge (*i.e.* with a shallow funnel). In December, 1931, I installed my old British Association gauge in the site formerly occupied by the Nipher shielded gauge and it functioned there for a year and a half with results that can be seen in full detail in *British Rainfall*, 1931 and 1932. So long as the wind was moderate, *i.e.* less than 18 m.p.h. (Force 4), the British Association gauge, with its cone close up to the very rim of the gauge, used to catch much the same amount of rain as gauge F, the very latest pattern of a standard Meteorological Office Snowdon funnel gauge. As the wind rose it fell back steadily to 86 per cent. of F on the 12½ days of high westerly winds (p. 286 of *British Rainfall*, 1932). Whenever *hail* occurred the British Association gauge was hardly able to retain any hailstones, and it was not much better at catching *snow*, especially drifted snow. Still for the whole 12 months from May, 1932, to April, 1933, the total catch of the British Association gauge was 95 per cent. of that of F on this exposed hillside. We may fairly conclude, therefore, that records of rainfall for the years before the "Snowdon" type came into general use are probably not more than one or two per cent. lower than the true rainfall in most places. Although they will certainly be found eventually to have been far too low in all situations that are much exposed, such as the gathering grounds of water-works and places like the Stye in Borrowdale,

The effect of a 7 ft. retaining wall on the catch of Gauge A. Most of us will have noticed how when you approach the edge of a tall cliff that faces a strong breeze there is an almost vertical rush of air up the face of the cliff. Here at Hutton John it is rare for us to have much precipitation with an easterly wind for we are under the " rain-shadow " of the Pennines and those hills dry the air pretty thoroughly on most occasions. When rain did reach us from the east, we always found A's catch low and we decided in October, 1932 to establish Gauge A_2 7 yards due west of A, and therefore 12 yards back from the face of the 7 ft. retaining wall. In p. 288, *British Rainfall*, 1932, will be found the full record of the only two days we had rain of an appreciable quantity with a S.E. wind. A caught ·62 inch, while A_2 got ·66 inch, *i.e.*, A_2 had 107 per cent. of A. The other 10 gauges on Kilnflatt Hill had catches reflecting roughly the varying degrees of shelter which they got from the Kilnflatt Wood. On the same page will be found the catches of all 12 gauges during the great snow-storm of February 24th to 26th, 1933, when a strong S.E. wind gave A_2 113 per cent. of A's catch. Table I, p. 286, *British Rainfall*, 1932, shows that this " cliff " action had little effect upon the total of 6 months from November 1932 to April, 1933. The percentages of lines (d) and (e) in that Table indicate clearly, however, that a cliff only 7 ft. high, when it is to the windward of a rain-gauge, will diminish the catch near the edge of that cliff, whenever a breeze blows straight at it. Further away from the edge an increased catch must be expected, somewhat like that which gauge J on Kilnflatt Hill always got in westerly gales.

Conclusions. The diagram, Fig. II, on p. 276 shows a section of the circular turf wall recommended as a result of these investigations for use in windy situations. It should be emphasized, however, that a turf wall should only be used where the gauge is already in the best available site and that that site is unduly exposed to the wind. A turf wall can only ameliorate the ill-effects of excessive exposure to the wind, it cannot convert a really bad site into a satisfactory site.

In October, 1933, I lifted the 10 gauges on Kilnflatt Hill, removed the wire fencing of the enclosures, levelled down the turf walls and filled up the pits, much to the satisfaction of my long-suffering farm tenant, who had begun to exercise a farmer's privilege of grumbling at the obstruction they caused, but who had loyally helped me during the seven years to police the gauges and protect them from mischief. Only twice did I find that sheep had pushed over the top of a gauge, and once only had some graceless youngsters put a snow-ball in the funnel of a gauge, not realising, I imagine, that all the other gauges would tell *me* that someone had played me a trick. It only remains for me to express my appreciation of the assistance given by the authorities of the Meteorological Office, who lent me ten of their standard gauges and visited me often to see how I was getting on, and discussed methods and results.

DETAILS OF EXPERIMENTAL GAUGES AT HUTTON JOHN, TOGETHER WITH DATES OF MODIFICATIONS.

(EXPERIMENTS TERMINATED OCTOBER, 1933.)

9th Nov. 1926.	25th Feb. 1927.	1928	Oct. 1929.	Dec. 1930.	Oct. 1931.	Oct. 1932	Altitude (ft.)		
Gauge on lower terrace, no artificial shelter, 5 yards W. of 7 ft. retaining wall. House and plantation 160 ft. away to W. 250 yards N. of experimental enclosures.							688	A	In the Gardens.
—	—	—	—	—	—	No artificial shelter 7 yds. due West of A.	688	A_2	
No artificial shelter.							724·6	B	Eastern enclosure (30 by 12 yds.) 11 yards E. of summit of Kilnflatt Hill.
In centre of 6 ft. sq. shield of 1 in. mesh 2 ft. 6 in. high, E. side left open.	Corner posts and wire netting lowered to 1 ft. 6 in.	Turf wall, crest 1 ft. high and parallel to hillside. Outside slope 1 in 3. (April.)	Turf wall, crest 1 ft. 6 in. high and horizontal. Outside slope 1 in 3.	Turf wall, crest 1 ft. 2 in. high and horizontal. Outside slope 1 in 4.			724·6	C	
In centre of circular palisade 10 ft. diam. 1 ft. 6 in. high.	Palisade driven into ground to form turf wall 1 ft. 3 in. high. Outside slope 1 in 3. Crest parallel to hillside.						724·6	D	

As C.	Mesh shield replaced by four 6 ft. iron hurdles 3 ft. 4 in. high.	As C, but crest horizontal. (April)		Turf wall, crest 1 ft. 2 in.	Turf wall, crest 1 ft.	722·1	E_1	Western Enclosure (22 by 12 yds. enlarged to 40 by 12 yds. in 1930) 29 yds. W. of summit of Kilnflat Hill.
—	—	As C, but crest parallel to hillside. (April)			Turf wall raised $2\frac{1}{2}$ in.	722·5	E_2	
As D.	No artificial shelter between E_1&E_2 but 14 ft. further from summit.					721·3	F	
—	—	—	—	In pit 8 ft. diam., rim in plane of hillside.		719·8	L	
—	—	—	—	On levelled bench, rim in plane of hillside.	Converted to pit diam. 11 ft.	717·8	M	
—	—	—	—	Nipher Shield.	Shield removed Dec. 1931 and B. A. Gauge set up.	720·8	N	
—	—	10 ft. 6 in. below top of Hill. (Nov.)				715	J	Close to Wood.
—	—	35 yds. E.N.E. of wood, ratio 1:1 (Nov.)		Removed Nov., 1930.	— —	678	K	
—	—	90 yds. E.N.E. of wood, ratio 1:2. (April)		Do.	— —	653	G	In Park.
—	—	190 yds. E.N.E. of wood, ratio 1:4. (April)	Turf wall, crest 1 ft. and horizontal.	Do.	— —	637	H	

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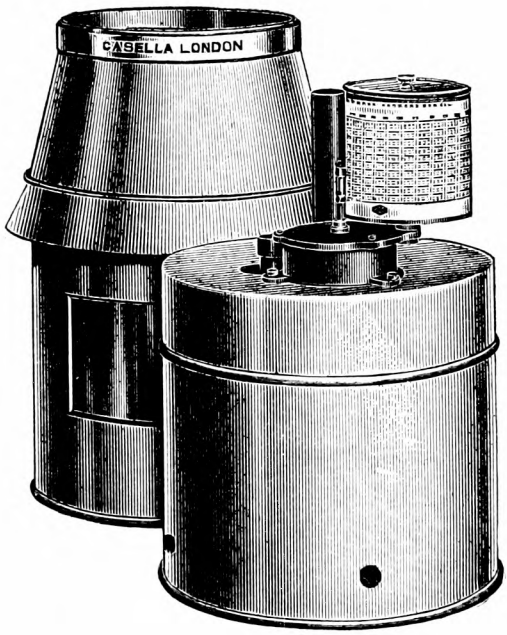

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